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A Comparison of Two Groups of Teacher-Trainees Whose Professional Experiences Differ in Organization, Scope and Sequence. Final Report.

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Descriptors-*Education Majors, Elementary School Teachers, *Interdisciplinary Approach, Knowledge Level, *Methods Courses, Student Teachers, Teacher Behavior, Teacher Education Curriculum

Two groups of education majors, enrolled in traditional and experimental methods courses, were compared in their knowledge of professional and general educational information, knowledge of the elementary school curriculum, classroom instructional behavior, and adaptability to changing classroom situations. The experimental methods course, prepared and taught by an interdisciplinary staff, was based on a theoretical model of classroom behavior and paralleled four traditional courses--Educational Psychology, Tests and Measurements, Children's Literature, and a methods seminar. The groups shared their other courses during the spring and fall semesters of 1967 and an additional semester of student teaching, during which they were observed and rated with the Teacher Verbal Behavior and Adaptability Record. The classroom ratings and posttest results of the National Teacher Examinations significantly favored the experimental group in general educational background (in written English and in combined social studies, literature, and fine arts but not in science or mathematics), professional information, and behavior while teaching language arts, social studies, mathematics, factual information, concepts, intellectual skills, and appreciation. In addition, the experimental group encouraged pupil discourse and transfers of learning. No significant differences were found in their knowledge of elementary school subject matter and methods. (LP)

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FINAL REPORT

Project No. 2930

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A COMPARISON OF TWO GROUPS OF TEACHER-TRAINEES WHOSE PROFESSIONAL EXPERIENCES DIFFER IN ORGANIZATION, SCOPE AND SEQUENCE

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June 28, 1969

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REPORT RESUME

Objective

The objective of the study was to compare teacher-trainees whose methods course utilized an experimental approach with teacher-trainees who experienced a more traditional professional sequence. The comparison was made in terms of (a) teacher-trainee knowledge of professional and general information, (b) teacher-trainee knowledge of the substantive content of the elementary school curriculum, and (c) two types of classroom behavior, namely: trainee instructional behavior and trainee ability to adapt to changing classroom situations.

Procedure

The study involved two groups, each of approximately 40 elementary education majors, who had been assigned randomly to one or the other of the Experimental Approach (Experimental Group) and the Traditional Approach (Control Group). The experiences of the two approaches extended over a period of two consecutive, regular 18-week semesters.

The essential difference between the experiences of the groups was in terms of methods course approach. The Control Group engaged in the usual experiences of the methods course which was taught by elementary education specialists, assisted by laboratory school teachers. The experiences planned and provided by the staff of professionals gave great emphasis to methods and materials of instruction in an elementary school. The Experimental Group was taught by psychology professors, subject matter specialists, and laboratory school teachers, using a jointly prepared syllabus of integrated course content. They planned and taught the scope and sequence of content emphasized in the elementary school and integrated the principles of teaching and learning, education as a social institution, and evaluation.

More specifically the course experiences of the Experimental Group included:

First Semester

1. An Orientation to the Elementary School

Library research on the changing nature of the elementary school; the changing nature of the responsibilities of the elementary school teachers; modern concepts of the elementary school child and his growth.

Visits to elementary schools of differing sizes and with differing organizational patterns.

2. Instruction in the Principles of Teaching-Learning

An examination of the psychological rationale of instructional practices--methods and materials.

3. Instruction in the Scope and Sequence of the Elementary School Curricular Emphases

Study of the main outcomes to be sought through the elementary school subjects, the basis concepts and skills which are included in these outcomes, as well as their attitudinal concomitants.

Second Semester

4. Instruction in the Utilization of Teaching-Learning Principles and Curricular Emphases

Study and illustration of the use of teaching-learning principles and subject content in attaining the objectives of the elementary school.

5. Observation and Analyzation of Work of Elementary School Teachers

Observation of the day-to-day work of elementary school teachers and analyzation of the observations in terms of teaching-learning principles and curricular emphases.

Student-Teaching

6. Regular Practicum Experience

Following the two-semester experimental phase, all student participants were visited, observed and rated three times by a trained observer-rater during an 18-week period of student-teaching.

Data and Statistical Techniques

Computational data used in the investigation were of two types:

1. Descriptive data.

    a. Scores on the Comprehensive College Tests to describe the groups in terms of their pre-experimental level of achievement in five basic areas of the college curriculum--English

Composition, Humanities, Mathematics, Natural Science and Social Sciences-History.

b. Scores on the Cooperative English Test to describe the groups in terms of their pre-experimental level of skills in Reading Comprehension and English Expression.

c. Scores on The School and College Ability Tests to describe the groups in terms of their tested scholastic aptitude.

2. Comparative data

a. Scores on the National Teacher Examinations: Professional Education Test to compare the two groups in terms of knowledge of professional information.

b. Scores on the National Teacher Examinations: General Education Tests to compare the two groups in terms of general preparation for teaching.

c. Scores on the National Teacher Examinations: Teaching Area Examination--Education in the Elementary School, to compare the two groups in terms of their knowledge of elementary school subject matter and methods.

d. Quantified results of observer recordings and ratings of trainees during student-teaching, using an instrument entitled "Teacher Verbal Behavior and Adaptability Record" (TVBAR) devised by the principal investigators, to compare the groups in terms of their classroom discourse and ability to adapt to changing classroom conditions.

Inasmuch as the sample was chosen mainly on the basis of its availability, few assumptions about the distribution and parameters of the population seemed justifiable. Therefore, the decision was made to use nonparametric statistical techniques to analyze the data. The Wilcoxin tests were used in making comparisons of the performance of the two groups with one exception being made with consistency. Whenever it was necessary to determine whether the incidence of observer ratings in the several categories departed significantly from chance expectancies, chi-square was the statistic that was computed.

Findings

Specific questions regarding differences in the group were set forth in the statement of the problem. Answers to these questions are submitted in summary of the analyses which were made during the investigation. Differences between the groups in designated areas of performance are reported below.

1. In general achievement:

   (a) Arithmetic differences, favoring the Experimental Group, were found to be significant in written English and in the combinational area of social studies, literature, and fine arts.

   (b) An arithmetic difference, which favored the Experimental Group, was found too small for statistical significance in the combinational area of science and mathematics.

2. In knowledge of professional information:

   Arithmetic differences, favoring the Experimental Group, were found to be of statistical significance.

3. In knowledge of elementary school subject matter:

   When the groups were tested for knowledge of elementary school subject matter combined with methods, arithmetic differences favoring the Experimental Group were too small to reach statistical significance.

4. In the logic of their instructional discourse:

   (a) When teaching behavior was rated according to subject matter areas, significant differences in directed discourse were found to favor the Experimental Group in their teaching of language arts, social studies, and mathematics. No significant differences were found between the groups in their discourse during the teaching of science.

   (b) When trainee discourse was analyzed according to instructional objectives, significant differences favoring the Experimental Group were found during the teaching of (1) factual information; (2) concepts and/or processes; (3) intellectual skills; (4) attitudes and appreciation.

   (c) During instruction, the discourse of the Experimental Group was found to contain an exceptionally high incidence of verbalizations that (1) invited and/or reacted to pupil discourse; (2) were designed to facilitate pupils' transfer of learning.

Recommendations

As a result of the findings and conclusions of this study, the following recommendations are offered:

1. The described Experimental Approach, having proved generally superior in this investigation to the described Traditional Approach, should be demonstrated and further perfected at several institutions which specialize in preparing teachers of culturally deprived children.

2. Institutions preparing secondary teachers should study the nature and findings of this investigation and consider devising a similar approach for training secondary teachers.

3. The Teacher Verbal Behavior and Adaptability Record, the Observer-Rater instrument devised and used in this investigation, should be used (a) to evaluate the quality of teaching behavior at the end of practicum experiences and (b) to instruct trainees during personal conferences and on-campus seminars which are parts of the student-teaching period.

4. There should be additional experimentation on the effectiveness of training teachers--elementary and secondary--using the theoretical model of classroom teacher behavior described in this investigation.

CHAPTER I

AN INTRODUCTION TO THE STUDY

This investigation evolved from the premise that the content of professional education could be taught in ways that would reveal the relationships among the objectives of the elementary school, its curricula and instructional procedures. In consequence, it was hypothesized that elementary school teacher-trainees would:

1. Understand that the instructional sequence is a process of using words to provide a thought model for pupils to follow as they accomplish a designated learning task.
2. Understand the organization of each subject matter area.
3. Understand the interrelationships among the subject matter areas.
4. Understand the usage of subject matter as a vehicle for pupils' attainment of the objectives of the elementary school.
5. Understand that methods of teaching are largely determined by the nature of that which is to be learned.
6. Give evidence of these understandings by:
    - (a) Scores earned on National Teacher Examinations: Professional Education (24).
    - (b) Scores earned on National Teacher Examinations: General Education Tests (24).
    - (c) Scores earned on National Teacher Examinations: Teaching Area Examination--Education in the Elementary School (24).
    - (d) Ratings of their instructional behavior during student teaching.
    - (e) Ratings of their ability to adapt to changing classroom conditions during student teaching.

The foregoing comparisons of the subjects with a control group yielded results which supported the original hypotheses.

Relevant Literature: The Background of the Study

An awareness of two increasingly urgent needs provided the impetus for the initiation of this study proposal. These needs were mainly shown by (a) the performance of Grambling College elementary education majors on the National Teacher Examinations and their reported teaching behavior, and (b) the widely accepted and verbalized need of an instrument with suitable validity and reliability for measuring teacher effectiveness. Evidence of these needs was documented in summaries of NTE scores of Grambling College elementary education majors which indicated that fewer than 20 per cent of them surpassed the median score of the national average (8). The second of the fore-mentioned needs is discussed with great clarity and thoroughness by Rose (27), Remmers (26) and Medley and Mitzel (22), all of whom score the need for valid and reliable instrumentation in order that teaching can be evaluated and thereby reach its potential.

Hence, this proposal was an attempt to provide integrating or integrative experiences for teacher-trainees. A basic aim was to add specificity to several pertinent, but inadequately verified, generalizations regarding the relevance of curriculum and methods in teacher-education to defensible, descriptive behaviors reasonably expected of modern elementary school teachers.

The choice of an interdisciplinary approach and overall research design was heavily influenced by the writings of Sarason, Davidson, and Blatts (29) and Remmers (26) and others (6) (15) (20).

Sarason, Davidson and Blatts (29: Chapters 4-6) are critical of teacher training programs having features like that of Grambling College. They say the usual teacher-training program falls far short of the objective of training students as psychological observers and tacticians capable of coping effectively with individual differences. This condition exists, according to the authors, because:

1. Courses in Educational Psychology, often good in facts, ideas, and theories, too often provide no way of knowing whether the thinking processes and skills of the teacher-trainee have been influenced by knowledge acquired.

2. "Laboratory courses" are so pre-structured that students do not have an opportunity to understand the nature of the observational process: its selectivity, its relation to personal values, its complexity, and its relation to action and planning for effective teaching in elementary school. The observer is too cued to seeing what he has been told to expect.

3. Practice teaching more often than not involves little training in problems of observation and individual differences; perhaps primarily because critic teachers are more concerned with lesson plans and classroom housekeeping problems than with harder-to-communicate problems of discerning and reacting critically to individual differences in children.

A specific call for an interdisciplinary approach to the study of teacher effectiveness was made in 1953 by the seven-member Committee on the Criteria of Teacher Effectiveness appointed by the American Education Research Association (26). This committee had been asked to "bring together persons representing various points of view and approaches to the investigation of the criteria of teacher effectiveness." It took as its primary problem the development of an acceptable conceptual definition of teacher effectiveness, which it considered to be prerequisite to a systematic attack on operational definitions and techniques. This group suggested that, since research on teacher effectiveness is a part of the field of research on social behavior, an interdisciplinary approach be used involving such fields as social behavior, learning theory and interpersonal relations.

Remmers (26) and others influenced the research design by their statement:

> Research on teacher effectiveness requires measurement of teacher behavior and characteristics, of the effects of teachers and of the intervening variables, that is, such other factors as affect the variables under investigation.

Other writings and reported research related to this study proposal may be summarized under the following three categories:

1. Problems and issues in the preparation and evaluation of preparation of elementary teachers, such as, presented by Gage (18), Rose (27), Cottrell (13), Bruner (4), Sarason, Davidson and Blatts (29) and others (2) (3) (25) (33) (35).

2. Theories of, and attempts at, interdisciplinary and/or integrative educational experiences in college and universities, such as presented by Cooper (11) and Mayhew (21).

3. The elements and dynamics of the psychology of learning and the psychology of teaching as presented by Bruner (4), Gage (18) and others (5) (7) (14) (18) (28) (37).

Sarason, Davidson and Blatts (29) charge that teacher-educators, in their search for program improvement, are prone to commit some of the very errors often argued against: namely, that verbalized knowledge is a sufficient condition for effective teaching behavior, and that curriculum and methods can be generated on logical grounds alone, without explicit empirical reference to a clear definition of what is effective teaching behavior. These authors categorize the problem of the relevance of content and procedures of teacher-education programs to the actual functions which teachers perform in their daily work as "basically unstudied."

Cottrell (13:415) reports that his survey revealed that a preponderance of abstractions rather than functional learning resulted from professional sequence in teacher education; this in spite of the fact that a major emphasis in professional education is upon how learning takes place. He called for a revised professional education sequence of experiences which prepares teachers to translate ideas into suitable action, and he makes the point that such an experimental sequence should be selected and organized with reference to teaching situations and educational problems to be met and effectively dealt with rather than logical subject matter relationship.

Turner and Fattu (35) were critical of procedures used in research on teacher effectiveness and predicted another seventy years of research would meet with meager results unless newer procedures and instrumentation are used.

Rose (27:49-50) discussed progress in the area of performance, evaluation and growth in teaching by speaking highly of recent studies employing schedules for classifying, analyzing and evaluating teacher performance. He characterizes teaching as a "specific form, or set of forms of habitualized human behavior" which is "observable, measurable, analyzable, differentiable and modifiable." He cites evidence from recent studies which indicate that the essential range of the average teacher's classroom behavior repertoire is revealed within 100 to 150 minutes if appropriate objective instruments are properly used over a well dispersed period of several teaching periods. This he described as due to repeated cycles of teaching behavior. He contends that there is a continuum of these cycles in terms of these ranges along which all teachers fall. Such a continuum, ranging from narrow-range-fairly-static repertoire to wide-range-flexible repertoire in dealing with classroom situations and pupils, points up the fact of differences among teachers in terms of their sensitivity to cues in the learning environment and their consequent effort to take such cues into account. Rose feels that it should perhaps be the aim of teacher educators to arm the new teachers with as much sensitivity and as many possibilities for appropriate response as possible. He calls for more research on the nature of these habitualized modes and how to identify and promote the desirable ones.

Rose (27) makes the point that teaching is complex, but not infinitely complex; and thus can be studied objectively. He contends that one key to the analysis of teaching performance is to devise a structure of elements into which any particular part of the whole process can be classified. This, he asserts, will afford a continuous multi-dimensional flow of teaching acts which can be segmented into manageable parts conducive to understanding singly and in their relation to the flow. This theory is basic to our planned use of an adaptation of the seemingly promising instruments described by Emlaw and others (17) and Meux and Smith (23) for assessing differences in classroom behavior of teachers.

Interdisciplinary approaches to teaching are not new, but certainly are recently receiving much experimental exposure. Most schemes of interdisciplinary teaching are labeled "integrative" and have not been subjected to systematic evaluation (16:110). Some evidence of the potential added advantages of such approaches, however, may be gleaned from the efforts of several Eastern Colleges and Universities (21). Boston University emphasized interdepartmental planning of the curriculum and reported achievement of a series of significant interrelationship of courses, thus, adding to their meaningfulness. Michigan State University found positive outcomes resulting from use of several distinctive techniques of course integration, one of which was an autonomous college of fully ranked faculty who spent full time organizing and teaching broad interdisciplinary courses. A productive interdisciplinary approach was achieved at Sarah Lawrence College by use of an advisory system whereby each student synthesized new knowledge during individual lengthy sessions with advisors who served as sounding boards. A core of required general education courses linked with a theological orientation provided the integrative device at St. Olaf's College. The evidence from these and a few other studies of similar kind (19:250) such as those described by Stickler (32), provides a rationale for hypothesizing increased gains from professional education courses presented via an interdisciplinary approach.

The rationale basic to duties assigned the subject matter specialists, psychologists and critic teachers in this study is presented by such authors as Bruner (4) and Gage and others (18).

Bruner's position (4:97) seems to be that research of the type which permits one to assess the success in managing relevant instructional variables requires close constant collaboration of teacher, subject matter specialist and psychologist. He calls for a curriculum prepared jointly by the subject matter experts, the teachers, and psychologists who give "due regards for the inherent structure of the material, its sequencing, and psychological pacing of reinforcement, and the building and maintaining of predispositions to problem solving."

Gage and others (18), in discussing the dynamics of the psychology of teaching and learning, hold that the cognitive approach to learning and teaching offers a maximum advantage. The cognitive approach entails the teacher's understanding of the structure and sequential relationship of facts, concepts, and principles of subject matter and how they may be presented to, and meaningfully grasped by learners.

As is readily apparent from the foregoing account of relevant research, the literature provided ample support for this approach to the training of elementary school teachers, yet did not reveal another study so designed nor one which involved a similar population.

Definition of Terms

To clarify the meaning of certain terms and expressions used in the study, the following explanatory statements and definitions are submitted.

Teacher-Trainees. Matriculating elementary education majors of junior and senior college level are referred to as "teacher-trainees."

The Traditional Approach. The expression "Traditional Approach" refers to a sequence of courses consisting of (1) seventeen semester-hours thought to be contributing directly to the (a) professional information, (b) knowledge of substantive content of the elementary school curriculum, and (c) classroom discourse and ability of trainees to adapt to changing classroom conditions; and (2) nineteen additional semester hours currently included in the curriculum sequence required of all elementary teacher-trainees. The seventeen-semester-hour sequence includes: a 3-semester-hour course in Tests and Measurements, taught by a Professor of Education; an 8-semester-hour course in Methods of Teaching in the Elementary School, taught by four Professors of Education with specializations in Elementary Methods; a 3-semester-hour course in Children's Literature, taught by a Professor of Education.

The Experimental Approach. The expression "Experimental Approach" refers to (1) a seventeen-semester-hour integrated course designed to contribute directly to (a) professional information, (b) knowledge of substantive content of the elementary school curriculum, and (c) classroom discourse and ability of trainees to adapt to changing classroom conditions; (2) nineteen additional semester hours currently included in the curriculum sequence required of all elementary teacher-trainees. The seventeen-semester-hour integrated course incorporated (1) psychology of teaching, (2) psychology of learning, and (3) substantive content of mathematics, children's literature, language arts, social studies and science. An interdepartmental faculty was comprised of two professors of psychology, professors of mathematics, social science, and natural sciences, and two professors representing the area of language arts.

Professional Information. The term professional information is given the usage employed by the authors of the National Teacher Examinations: It refers to the knowledge of "education as a social institution, child development and educational psychology, guidance and measurement in education, and general principles and methods of teaching."

Substantive Content of the Elementary School Curriculum. The expression "substantive content of the elementary school curriculum" refers to elementary school subject matter as a specialized teaching field as it is measured by the National Teacher Examinations: Option 1--Education in the Elementary School.

Instructional Discourse. The term "instructional discourse" is given the same usage as "classroom discourse" in the Meux and Smith (24) study of logic in classroom discourse and refers to specified categories of verbal exchange between students and teachers in classroom situations. (See Appendix I.)

Ability to Adapt to Changing Classroom Conditions. The behavior referred to as "ability to adapt to changing classroom conditions" is used to mean "the teacher's ability to think on his feet; to adapt teaching objectives, content, and method to the changing conditions of the classroom" (17).

Major Objective and Hypotheses

The major objective of the study was to determine what differences, if any, existed between elementary teacher-trainees whose curricular experiences included the "Traditional Approach" and those whose curricular experiences included the "Experimental Approach." More specifically, the study sought answers to the following questions:

What differences, if any, existed between elementary teacher-trainees whose pre-service education included the Experimental Approach and trainees with different experiences:

1. in their general achievement?
2. in their knowledge of professional information?
3. in their knowledge of the elementary school subject matter?
4. in their instructional behavior?
5. in their ability to adapt to changing classroom conditions?

In order to give direction to the statistical analysis employed in the study the following hypotheses were tested.

Hypothesis I

There is no difference within this sample of elementary school teacher-trainees in general preparation for teaching irrespective of the nature of their professional experiences.

Hypothesis II

There is no difference within this sample of elementary school teacher-trainees in knowledge of general professional information irrespective of the nature of their professional experiences.

Hypothesis III

There is no difference within this sample of elementary school teacher-trainees in knowledge of elementary school subject matter and methods irrespective of their professional experiences.

Hypothesis IV

There is no difference within this sample of elementary school teacher-trainees in the logic of their classroom discourse and ability to adapt to changing classroom conditions irrespective of their professional experiences.

Scope of the Report

This report embraces the problem as originally perceived, the questions to which it sought answers and the hypothesis tested, a description of the methods, a discussion of the findings and their interpretations, conclusions warranted by the findings, and recommendations.

Limitations of the Study

Possibly one of the first limitations to which attention should be called is to be found in the selection of the sample. Obviously, it must be classified as an incidental sample, since it was comprised of students who had already declared an elementary education major at Grambling College. Consequently, the sample doubtlessly suffers some of the disadvantages inherent in the use of a population so selected. There is certainly a possibility that among the variables which had to be left undescribed were some which might correlate relatively high with the experimental variable.

Secondly, mention must be made of the small size of the sample resulting primarily from changes in the internal organization of

Grambling College that led to a sharp decline in the number of students electing to major in elementary education.

A third factor which gave concern was the homogeneous nature of the population. Inasmuch as there are strong indications that teaching behavior tends to reflect the instructional practices of the "previous teachers of the teacher," there arises a question of the effect this factor might have had upon the teaching behavior of a sample whose total elementary and secondary educational experiences had been in segregated schools in the deep south.

That the research design allowed so little time for the development of materials to be used in the training of the experimental group proved to be a serious mistake. In consequence, there is every reason to believe that a sample population given the opportunity to utilize the instructional materials in their final fully developed form might reflect an even higher level of professional competence than was reached by the subjects of this investigation.

Significance

The uniqueness of the study and its potential significance were reported in the original study proposal as follows:

> First, these investigators, in reviewing the literature, found no record of the particular combination of courses and other educative experiences that are planned in the proposed study. Secondly, there is uncommon objectivity provided in measuring and appraising antecedent and criterion variables which have very practically based significance. In the third place, the population sample proposed is a selected group of Negro teacher-trainees enrolled in a small state-supported college which prepares a very substantial proportion of all teachers for Negro elementary schools in the State of Louisiana.*

Developments in two areas during the period of the investigation have added at least two other facets of significance.

First, the heightened awareness that the education of American children with academic deficits must be given serious attention gives signal importance to the fact that this investigation was a study of the effects of a particular set of pre-service professional experiences on the teaching behaviors of trainees. These trainees once described as "academically deficient," were rated as they demonstrated their skills in teaching academically deficient pupils.

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*Original proposal basic to this project submitted to the U. S. Office of Education, p. 1.

Secondly, the investigators, in full support of the trend to study teaching behavior rather than teaching "effectiveness," (34:223-47) devised a "theoretical model" of such behavior. As a result, the study investigated the teaching behavior of trainees who had attempted to master a teaching model.

CHAPTER II

PROCEDURES

Population and Design

The initial study population was composed of approximately eighty-six junior-level students matriculating at Grambling College who had been given either conditional or unconditional admission to the elementary teacher education curriculum as of September, 1966, and who met the following additional criteria.

1. Would be expected to successfully complete all courses (43 semester hours) comprising the general education requirements described in Appendix A at the end of the Fall Semester of the 1966-67 school year.

2. Would be expected to have successfully completed the following two courses in professional education at the end of the Fall Semester of the 1966-67 school year:

Introduction to Education	3 semester hours
Child Psychology	3 semester hours

3. Had not attempted either of the following four courses:

Educational Psychology	3 semester hours
Tests and Measurements	3 semester hours
Children's Literature	3 semester hours
Elementary Education Seminar (Methods)	8 semester hours

The experimental design was the test-retest control method in which the eighty-six students were divided randomly and evenly into a Control Group and an Experimental Group matched in terms of such criteria as years in college, scholastic aptitude and academic achievement as indicated by scores made on the following three tests:

(1) The School and College Aptitude Test (30)
(2) The Cooperative English Test
    Total Reading and Total English (12)
(3) The Comprehensive College Tests (10)

The raw scores made on these tests are presented in Appendix B (Tables 10 and 11) and the statistical analyses of scores to ascertain the extent of differences between the two groups are presented in Tables 1 and 2. Differences between the two groups were not statistically significant inasmuch as they could be expected to occur by chance as many as eighteen to ninety times in a hundred.

Each of the two groups was initially comprised of forty-three student participants. However, both groups lost some students because of drop outs, illnesses and other unavoidable factors before or during the experimental phase of the study. Final data analysis and interpretation were based on a maximum population of sixty-two students, thirty-one students in each group.

Methods

The Control Group experienced the Traditional Approach; the Experimental Group, the Experimental Approach.

Course experiences and teaching personnel for the two groups during the two 18-week experimental periods are depicted in Charts 1 and 2. Chart 1 shows course titles, semester hours and clock hours of classes. Chart 2 describes similarities and differences in the teaching personnel for the two groups.

It should be noted that the two groups had the following points of similarity:

1. Each had seven instructors, equal in educational qualifications, who had approximately equal scheduled time for conferences with students. (See Appendix C.)

2. There was much commonality of content inasmuch as both approaches entailed subject matter commonly ascribed to specified courses in the professional education sequence.

3. Each had the same number of clock hours of formal class work, earning the same number of credit hours. (See Chart 1.)

4. Each adhered to the same class attendance and grading standards.

5. Each had 13 laboratory school teachers whom they observed in demonstration teaching and with whom they experienced individual and group critiques.

TABLE 1

COMPARISON OF SCORING ON FRESHMAN TESTS
(E - Experimental; C - Controls)

Test	Group $n_1=28=C$ $n_2=30=E$	Range of Scores	Q_1 Mdn Q_2	Mw[a]$=826$	σ_w[b]$=64$
				W[c]	P
SCAT (Total)	E	260 - 293	272 276 283	939.5	.36[d]
	C	260 - 297	266 271 279	766.5	
Cooperative English (Total Reading)	E	129 - 150	138 140 143	957.5	.25[d]
	C	128 - 153	133 137 140	753.5	
Cooperative English (Total Eng.)	E	129 - 151	138 140 144	970.5	.18[d]
	C	125 - 152	135 137 142	740.5	

[a] By formula $Mw = \frac{n_1(n+1)}{2}$

[b] By formula $\sigma_w = \sqrt{\frac{n_1 n_2 (n+1)}{12n(n-1)}}$

[c] Sum of ranks

[d] Not statistically significant (two-tailed test)

TABLE 2

COMPARISON OF SCORING ON COMPREHENSIVE COLLEGE TESTS TAKEN DURING JUNIOR YEAR

(E - Experimental; C - Controls)

Tests	Group $n_1=31=C$ $n_2=31=E$	Range of Scores	Q_1 Mdn Q_2	$Mw^a=976$	$\sigma_w^b=71$
				W^c	P
English	E	232 - 491	295 382 411	1038.5	$.38^d$
	C	238 - 462	295 353 405	914.5	
The Natural Sciences	E	282 - 508	363 395 428	1136.5	$.90^d$
	C	293 - 514	336 390 422	968.0	
Mathematics	E	344 - 439	344 360 391	1029.5	$.52^d$
	C	344 - 415	344 360 375	936.0	
Humanities	E	326 - 494	353 386 413	995.0	$.80^d$
	C	326 - 467	359 380 424	958.0	
Social Studies and History	E	325 - 467	358 385 423	1121.0	$.20^d$
	C	325 - 429	363 374 396	886.5	

[a] By formula $$Mw = \frac{n_1(n+1)}{2}$$

[b] By formula $$\sigma_w = \sqrt{\frac{n_1 n_2 (n+1)}{12n(n-1)}}$$

[c] Sum of ranks

[d] Not statistically significant (two-tailed test)

First Semester (18 Weeks) Spring, 1967		Second Semester (18 Weeks) Fall, 1967	
Traditional Approach (Controls)	Experimental Approach (Experimentals)	Traditional Approach (Controls)	Experimental Approach (Experimentals)
Ed. 307--Tests and Meas., 3 sem. hrs. (three 50 min. periods per wk)	The Integrative Course Content--9 sem. hrs. (three 150 min. periods per wk)	Ed. 308--Seminar in Elem. Ed. (Methods), 8 sem. hrs. (three 150 min. periods per wk)	The Integrative Course Content--8 sem. hrs. (three 150 min. periods per wk)
Ed. 304--Children's Lit., 3 sem. hrs. (three 50 min. periods per wk)		Art 309--Practical Arts 3 sem. hrs.	Sames as for Controls
Ed. 305--Ed. Psych. 3 sem. hrs. (three 50 min. periods per wk)		Mus. 320--Music Education, 3 sem. hrs.	Sames as for Controls
Eng. 310--Advanced Comp., 3 sem. hrs.	Same as for Controls	PE 300--Methods & Materials in Phy. Ed., 2 sem. hrs.	Same as for Controls
Ed. 306--Reading in the Elem. School 3 sem. hrs.	Same as for Controls	Electives--2 sem. hrs.	Same as for Controls
Art 308--Practical Arts, 3 sem. hrs	Same as for Controls		
Total 18 s. h.	Total 18 s. h.	Total 18 s. h.	Total 18 s. h.

CHART 1

COURSE EXPERIENCES OF THE TRADITIONAL AND EXPERIMENTAL APPROACHES DURING TWO CONSECUTIVE 18-WEEK SEMESTERS

Teaching Personnel For Course Experiences

Traditional Approach (Controls)	Experimental Approach (Experimentals)
Three (3) regular staff (elementary education professors) teaching the following courses: Ed. 304-Children's Literature Ed. 307-Tests and Measurements Ed. 305-Educational Psychology	Two (2) regular staff (psychology professors) and
Four (4) regular staff (elementary education specialists) teaching the following course: Ed. 308-Elementary Education Seminar (Methods)	Five (5) regular staff (subject matter specialists from the Division of Liberal Arts) teaching the following course: The Integrative Course Content
Total 7 professors	Total 7 professors

Six (6) members of the regular faculty, routinely scheduled for the following courses:

Ed. 306-Reading in the Elementary School
Art 308-Practical Arts
Art 309-Practical Arts
Eng. 310-Advanced Composition
Music 320-Music Education (Regular staff members)
PE 300-Methods and Materials in Physical Education,
    (Regular staff members)
Thirteen (13) Laboratory School Teachers
    (Teachers to be observed)

CHART 2

SUMMARY OF REGULAR TEACHING PERSONNEL FOR THE TRADITIONAL AND EXPERIMENTAL APPROACHES

The two groups differed essentially in the organization, scope and sequence of their professional experiences. The Control Group had the presently prescribed experiences of the methods course after having had Educational Psychology, Tests and Measurements, and Children's Literature as separate courses. Elementary Education Seminar (Methods) was taught by elementary education specialists, assisted by laboratory school teachers. The professors, in this approach, planned and taught a scope and sequence of content which gave great emphasis to methods and materials of instruction in elementary school.

The Experimental Group was taught by psychology professors, subject matter specialists and laboratory school teachers using a jointly prepared syllabus of integrated course content. They planned and taught the scope and sequence of content emphasized in the elementary school and integrated therewith the content and principles commonly ascribed to the courses Educational Psychology, Tests and Measurements, and Elementary Education Seminar (Methods).

Description of Procedures

Preparatory Procedure

The initial phase of the study was devoted to preparation of a syllabus to be used with the Experimental Group. The syllabus, entitled "Toward the Professional Preparation of Elementary School Teachers," (9) was designed to contribute to the professional preparation of elementary teacher-trainees via integrative content in areas commonly ascribed to the following courses:

Educational Psychology
Tests and Measurements
Children's Literature
Elementary Education Seminar (Methods)
(Total 17 semester hours)

The integrative content of the syllabus was prepared by the interdepartmental faculty under direction of Dr. Harl R. Douglass, Consultant in Education, University of Colorado. The following is a very brief descriptive outline of the content of, and activities associated with, the syllabus:

1. Orientation to the elementary school: Its curricular patterns and objectives (cognitive, psychomotor, and affective).

2. Instruction in the principles of teaching-learning.

3. Instruction in the scope and sequence of the elementary school curricular emphases..

4. Instruction in the utilization of teaching-learning principles and curricular emphases in the realization of the objectives of the elementary school.

5. Opportunities to observe the day-to-day work of the elementary school teacher and to analyze the observations in terms of teaching-learning principles and curricular emphases.

The first draft of the syllabus was completed prior to the fall semester, 1966-67. During the fall semester, the syllabus was revised extensively as a result of findings during trial use of it with thirty junior-level elementary teacher-trainees who were eligible for admission to the course, Elementary Education Seminar (Methods).

During the development of the syllabus, staff efforts to describe the instructional process as an integration of principles of teaching-learning and evaluation led to a "theoretical model of relationships for optimum classroom learning." This model of teaching behavior emphasized teacher instructional discourse and teacher adaptability to sudden classroom problem situations. Although the use of teacher discourse relied heavily upon the theorizing of B. O. Smith (31), Rita Emlaw and others (17), careful examination of an instrument described by Morton Waimon and others (36) revealed many features useful in rating observed teaching behavior which followed the "theoretical model." As a result, the investigators devised an adaptation of that instrument for use during the evaluative phase of the investigation, and labeled it "Teacher Verbal Behavior and Adaptability Record" or TVBAR. (See Appendix D.)

The adapted instrument then was refined and validated with Dr. Arthur L. Irion, Chairman, Psychology Department, Tulane University, as consultant.

Experimental Procedure

All junior-level elementary education majors who were enrolled for the Spring Semester, 1966, and who met the criteria for inclusion in the study were used. Subsequently, they were assigned to one or the other of two groups by odd-even-numbers procedure, and administered the following group of tests in order to determine the comparability of their academic aptitude, general achievement, reading and language capabilities.

(1) The School and College Aptitude Test
(2) The Cooperative English Test
    Total Reading and Total English
(3) The Comprehensive College Tests

The experimental phase (the Traditional Approach and the Experimental Approach) of the study, which began immediately after pre-testing at the beginning of the Spring Semester of the 1966-67 school year, was two consecutive 18-week semesters in duration.

In order to minimize the likelihood of the "Hawthorne" effect, throughout the experimentation, identical incentives were offered the two groups:

1. They were known on the campus simply as "participants in Education Project #2930."
2. They engaged in joint social affairs.
3. They held individual and group conferences with the principal investigators.
4. They were privileged to attend all lecture-discussion sessions with special project consultants. (See Appendix F.)

The experimentation is described below as the Traditional Approach and the Experimental Approach.

I. Traditional Approach

The Control Group, with which was employed the Traditional Approach to preparing elementary teacher-trainees, had the experiences associated with the following courses:

A. Educational Psychology (3 semester hours)

B. Tests and Measurements (3 semester hours)

C. Children's Literature (3 semester hours)

D. Elementary Education Seminar (Methods) (8 semester hours)

E. The seven (7) additional courses included in the regular elementary education sequence and common to the Traditional and Experimental Groups (19 semester hours)

(Total semester hours 36)

A description of courses comprising the Traditional Approach is presented in Appendix E.

II. Experimental Approach

The Experimental Group, with which was employed the Experimental Approach to preparing elementary teacher-trainees, had experiences associated with (a) seven (7) courses common to the Traditional and Experimental Approaches (19 semester hours), and (b) the especially prepared integrative course content, (17 semester hours).

For description of the seven common courses see Appendix E.

The Experimental Group made use of the syllabus described in this section and had the following professional experiences in the order presented:

Phase A

1. The psychology professors gave instruction on orientation to the elementary school. Three public schools fitting the following descriptions were visited:

    a) A rural school, enrollment three hundred, grades 1-8.
    b) One modern, large, city school, enrollment over one thousand, grades 5-8.
    c) One semi-rural school, enrollment five hundred, grades 1-6.

2. The psychology professors gave instruction on the principles of teaching-learning cognitive outcomes.

3. Each subject matter specialist, in turn, identified the major cognitive properties of his curriculum area--language arts, social studies, science and mathematics.

4. The psychology professors showed how the subject matter of language arts, social studies and mathematics can be utilized, according to psychological principles, in realization of the cognitive outcomes of the elementary school. This included methods and aids that maximize the likelihood of motivation, conceptualization, retention, and transfer, and provide for individual pupil differences and evaluation.

5. The laboratory school teachers were observed as they illustrated the day-to-day work of the teacher. The observations were analyzed in seminar-discussions with the psychology professors, and in critiques with the laboratory school teachers.

Phase B

Steps 2-5 above were repeated with psychomotor learnings as the focus.

Phase C

Steps 2-5 above were repeated with affective learnings as the focus.

Phase D

Step 5 above was repeated with the focus on planning for teaching:

a) Studying individual pupils
b) Lesson planning
c) Marking, grading, and reporting to parents
d) Parent conferences
e) Professional ethics

(Total semester hours 36)

Other Personnel and Procedures

Other Personnel

Observer-Rater.--The Observer-Rater was Mrs. Maxine Chambers, recently retired Supervisor of Instruction for elementary schools of Caddo Parish, the most populous, modern and progressive school system in North Louisiana. Mrs. Chambers, whose 30 years of educational and professional experience include a Master's degree plus additional study, fourteen years of public school teaching, three years of college teaching and counseling, sixteen years as supervisor of instruction and innumerable consultative and leadership roles in elementary education, is one of the region's most reputable and highly respected educators. She was particularly suited for this project because, in addition to her distinct professional competence, she was well known in all of the schools where Grambling College teacher-trainees are regularly assigned to do student-teaching.

Consultant-Lecturers.--Nine well-known scholars served as consultant-lecturers to this project and were invited to render special lectures to joint meetings of the Control and Experimental Groups during the experimental period. The names, addresses and consultative disciplines of the consultant-lecturers are presented in Appendix F. These consultant-lecturers were equally receptive to and available for individual conferences with students and teachers of Control and Experimental Groups.

Other Procedures

Teacher's Verbal Behavior and Adaptability Record (TVBAR).--It was necessary to train the Observer-Rater in the use of the "Teacher Verbal Behavior and Adaptability Record," referred to in this section as TVBAR. This was done via the following means:

1. The TVBAR, with complete instructions on procedure for use, was sent to the Observer for study one week prior to the first of a series of interpretive sessions involving the Observer and the two principal investigators who devised the instrument. During five two-hour interpretive sessions, the Observer and principal investigators came to full agreement as to the intended meaning of each item describing procedure in using the instrument and each item of instructional behavior to be recorded and rated.

2. Using three 10-minute video tapes of micro-teaching skits done by students--trainees taught according to the theoretical model of classroom behavior--comprising the class with which the syllabus was tried and modified, the Observer practiced using the TVBAR under direct guidance of the principal investigators.

3. The Observer-Rater requested and was granted permission to try TVBAR in several classrooms of experienced teachers in Shreveport (Caddo Parish), Louisiana. Some slight modifications of the instrument resulted from this.

Micro-teaching.--In study of the theoretical model of classroom behavior in the Experimental Group, the trainees engaged in five-to-eight minute micro-teaching skits. Eight of these skits were later used to lead the students of the Experimental Group through guided evaluation of their understanding and behavioral mastery of the model.

Observation of Day-to-Day Work of Laboratory School Teachers.--For their second 18-week experiences the Experimental Group was assigned a work-study area in the Grambling College Laboratory Elementary School. They were accorded library and lunch room privileges and became a recognized part of the elementary school population.

The eight 50-minutes per week which were allotted to the integrative course experiences of this phase were scheduled as follows:

Laboratory Experiences (Observations)	MWF - 10-10:50 a.m.
Seminars	MWF - 11-11:50 a.m.
Individual or Small Group Conferences	WF - 3- 3:50 a.m.

The observations, though scheduled, were only semi-structured inasmuch as they were designed to focus upon general day-to-day teaching behavior as well as designated instructional behaviors. (See Appendix J, "Laboratory Teacher-Student Observation Schedule.") Immediately following a laboratory period, the trainees would return to their work-study area for a discussion of their observations. Although the specific teaching behavior under observation during the previous period was of paramount concern, observed unexpected classroom incidents frequently dominated the discussion period and proved very fruitful for teaching-learning.

Since the locus of the trainees' work-study area was the elementary school, the opportunity to observe teacher-pupil interactive behavior was continuous. Many seminar sessions, as well as individual and small group conferences, were devoted to discussions of a teacher-pupil verbal exchange which occurred in the lunch room, the corridors, or on the playground. Actually, a reading specialist, all para-professional, and nonprofessional personnel of the laboratory school were included in trainee observations and opportunities for learning.

The individual and small group conferences were varied in nature. Although they often involved the critic teacher and the trainees who had been observers earlier in the day, other staff members--psychology professors and subject matter specialists--were frequently included. Since there was always a learning task for the trainees (See Appendix J, "Schedule of Activities"), the conferences were structured by trainee decisions about topics and personnel which seemed to hold greatest potential for task mastery.

Problem-Clinics.--During the student-teaching period of the investigation, the Experimental Group was required to send in regular reports and return to campus at regular intervals to participate in "Problem Clinics." The topics of these reports and clinics were problems encountered in the classroom. The sessions were focused on analysis and effective solution of problems delineated. The "Schedule of Problem Clinics," showing subject foci, is presented in Appendix G.

Extension of Student-teaching.--Contrary to original plans of the project authors and directors, it was necessary to extend the student-teaching period over two, rather than one, 18-week semesters. This became necessary because a total of eighteen students (9 in the Experimental Group and 9 in the Control Group) were not declared eligible for student-teaching in time to join other participants during the Spring Semester, 1967-68. These students did student-teaching and were visited by the Observer-Rater during the Fall Semester, 1968-69. (See "Schedule of Observer-Rater Visits" in Appendix H.)

Data and Statistical Techniques

Computational data used in the investigation were of two types:

1. Descriptive data.

    a. Scores on the Comprehensive College Tests (10) to describe the groups in terms of their pre-experimental level of achievement in five basic areas of the college curriculum--English Composition, Humanities, Mathematics, Natural Science and Social Sciences-History. (See Table 2.)

   b. Scores on the Cooperative English Test (12) to describe the groups in terms of their pre-experimental level of skills in Reading Comprehension and English Expression. (See Table 1.)

   c. Scores on The School and College Ability Tests (30) to describe the groups in terms of their tested scholastic aptitude. (See Table 1.)

2. Comparative data.

   a. Scores on the National Teacher Examinations: Professional Education Test (24), to compare the two groups in terms of knowledge of professional information. (See Table 4.)

   b. Scores on the National Teacher Examinations: General Education Tests (24) to compare the two groups in terms of general preparation for teaching. (See Table 3.)

   c. Scores on the National Teacher Examinations: Teaching Area Examination--Education in the Elementary School (24), to compare the two groups in terms of their knowledge of elementary school subject matter and methods. (See Table 4.)

   d. Quantified results of observer recordings and ratings of trainees during student-teaching, using an instrument entitled "Teacher Verbal Behavior and Adaptability Record" (TVBAR) devised by the principal investigators, to compare the groups in terms of their classroom discourse and ability to adapt to changing classroom conditions. (See Tables 5 and 6.)

Inasmuch as the sample was chosen mainly on the basis of its availability, few assumptions about the distribution and parameters of the population seemed justifiable. Therefore, the decision was made to use nonparametric statistical techniques to analyze the data. The Wilcoxin tests (1:141-157) were used in making comparisons of the performance of the two groups, with one exception being made with consistency. Whenever, it was necessary to determine whether the incidence of observer ratings in the several categories departed significantly from chance expectancies, chi-square was the statistic that was computed (1:186-201).

CHAPTER III

ANALYSES AND DISCUSSION OF DATA

These results, which represent the findings of the study and interpretations which the data support, are presented here in the order of previously listed questions and hypotheses.

Hypothesis I

In order to answer the first of the series of questions the following hypothesis was tested: there is no difference within this sample of elementary school teacher-trainees in their general preparation for teaching irrespective of the nature of their professional experiences.

The criterion of general preparation for teaching was performance on the three tests in General Education of the Common Examinations of the National Teacher Examinations: Written English Expression; Social Studies, Literature, and Fine Arts; Science and Mathematics.

Table 3 presents a summary of data and the tests of significance of the differences in scores earned by the two groups which constituted the sample.

Application of the Wilcoxin two-sample test for the unpaired case revealed some differences too large to be attributed to chance. The difference in the scoring of the two groups on the Written English Examination was so large that it could be expected to occur by chance less than one time in a hundred (P = .01); and the difference in scores on the Social Studies, Literature and Fine Arts Test could be expected to occur by chance less than five times in a hundred (P = .05). Therefore, the question of difference in general preparation for teaching may be answered affirmatively, with note taken that the differences are in favor of the Experimental Group. Hence, the hypothesis of no difference in general preparation, as measured by these two tests, is held untenable and the significant differences are assumed to reflect the effects of the experimental treatment. No significant difference was established in the scoring on the Test of Science and Mathematics (P = .65); the null hypothesis was thereby upheld.

TABLE 3

COMPARISON OF SCORES ON TESTS OF GENERAL EDUCATION OF THE NATIONAL TEACHER EXAMINATIONS
(E - Experimental; C - Controls)

Test	Group $n_1=28=C$ $n_2=30=E$	Range of Scores	Q_1 Mdn Q_2	$Mw^a=976$	$\sigma w^b=71$
				W^c	P
Written English	E	37 - 69	42 46 52	1163.5	.006[d]
	C	32 - 55	37 41 47	783.5	
Social Studies Literature and Fine Arts	E	37 - 51	41 45 47	1115.0	.03[e]
	C	31 - 51	38 41 46	838.0	
Science and Mathematics	E	34 - 57	43 49 50	943.5	.65
	C	36 - 57	44 47 49	1011.0	

[a] By formula $$Mw = \frac{n_1(n+1)}{2}$$

[b] By formula $$\sigma w = \sqrt{\frac{n_1 n_2 (n+1)}{12(n-1)}}$$

[c] Sum of Ranks

[d] Significant beyond the .01 level of confidence (two-tailed test)

[e] Significant at the .05 level of confidence (two-tailed test)

Hypothesis II

The second hypothesis tested was: there is no difference within this sample of elementary school teacher-trainees in knowledge of general professional information irrespective of the nature of their professional experiences.

The criterion of general professional information was performance on the Professional Education Test of the National Teacher Examinations. The summary of scoring on this test is presented in Table 4. When the Wilcoxin test was applied, the arithmetic difference, which favored the Experimental Group, proved too large to occur by chance as often as twice in one hundred times (P = 0.018). Thus, the question of difference may be answered affirmatively, the hypothesis of no difference rejected, and the established difference assumed to reflect the effects of the nature of professional experiences of the Experimental Group.

Table 4 also presents a summary of the scoring of the sample on the total Common Examinations of the National Teacher Examinations. Inasmuch as application of the Wilcoxin test revealed that the observed difference in favor of the Experimental Group would occur by chance less than three times in a hundred (P = .025), one may conclude that there was a difference in the groups, thus supporting the assumption that the higher scores might be attributed to the nature of the professional experiences of the Experimental Group.

The higher scoring of the Experimental Group is also readily apparent in the pattern of scores made on the tests. The medians as well as both quartiles are higher on both tests, with the arithmetic differences on the total Common Examinations appreciably higher.

Hypothesis III

To answer the third in the series of questions, the following hypothesis was tested: there is no difference within this sample of elementary school teacher-trainees in knowledge of elementary school subject matter irrespective of the nature of their professional experiences.

The criterion for tested knowledge of elementary school subject matter was performance on the Teaching Area Examination of the NTE--Education in the Elementary School--which tests knowledge of subject matter and methods.

Table 4 presents a summary of data and the test of significance of difference in scores on the Teaching Area Examination of the NTE. The descriptive statistics--range, median, and quartiles--favor the Experimental Group, with the difference in score value of the medians being 40 points. However, application of the Wilcoxin test of significance upholds the hypothesis of no difference in the groups in their knowledge of elementary school subject matter and methods. In spite of the arithmetic difference in the scores, which favors the Experimental Group, the difference could be expected to occur by chance about seventeen times in one hundred (P = .17). Therefore, according to this criterion, the question of differences must be answered negatively. (See Table 4.)

The observer's ratings of knowledge of elementary school subject matter and methods which the sample manifested during student teaching are presented in Figure 1.

The bar graphs depict the observer's ratings of the trainees tabulated according to subject matter areas. As can be seen, the subjects representing the Experimental Group were rated superior in knowledge of subject matter and methods in all areas with the greatest difference being shown in mathematics and the least in the teaching of the language arts.

Hypothesis IV

In order to answer the final question, Hypothesis IV was stated: there is no difference in the logical instructional discourse of this sample of elementary school teacher-trainees irrespective of the nature of their professional experiences.

The hypothesis was so phrased in order to provide a major test of the effectiveness of the experimental treatment. The rationale for this choice may be found in the following assumptions upon which the experimental design is predicated:

1. The essence of instruction is communication: communicating to pupils (a) an apparently realistic goal and an acceptable reason for attempting it; (b) alternative ways by which the goal may be reached; (c) appropriate guidance, and stimulation sufficient to minimize ineffectual efforts and sustain interest; (d) an evaluation of the results of their efforts.

2. If teacher-trainees understand the nature and structure of the several subject matter areas in relation to the expected learning outcomes of the elementary school, they can be taught to focus and order their communications in ways that build a thought model sufficiently clear for pupils to follow.

Observer ratings were used as the criteria for Hypothesis IV. Each of the subjects was observed, while doing student-teaching, during three timed instructional periods. A summary of their instructional discourse, categorized according to the theoretical model of teaching behavior, is presented in Table 5 with the results of the tests of significance.

TABLE 4

COMPARISON OF SCORES ON TESTS OF THE NATIONAL TEACHER EXAMINATIONS (NTE)

Test	Group n_1=28=C n_2=30=E	Range of Scores	Q_1 Mdn Q_2	M_W[a]=976	σ_W[b]=71
				W[c]	P
Professional Education	E	28 - 61	43 48 54	1129.5	.018[d]
	C	28 - 61	38 43 48	807.5	
Total Common Examinations	E	339 - 570	433 468 513	1136.5	.025[d]
	C	355 - 560	392 426 456	816.5	
Education in the Elementary School (NTE)	E	440 - 600	490 520 540	1075.0	.17
	C	400 - 590	470 480 520	878.0	

[a] By formula $$M_W = \frac{n_1(n+1)}{2}$$

[b] By formula $$\sigma_W = \sqrt{\frac{n_1 n_2 (n+1)}{12n(n-1)}}$$

[c] Sum of ranks

[d] Significant at or beyond .05 level of confidence (two-tailed test)

(E - Experimentals; C - Controls)

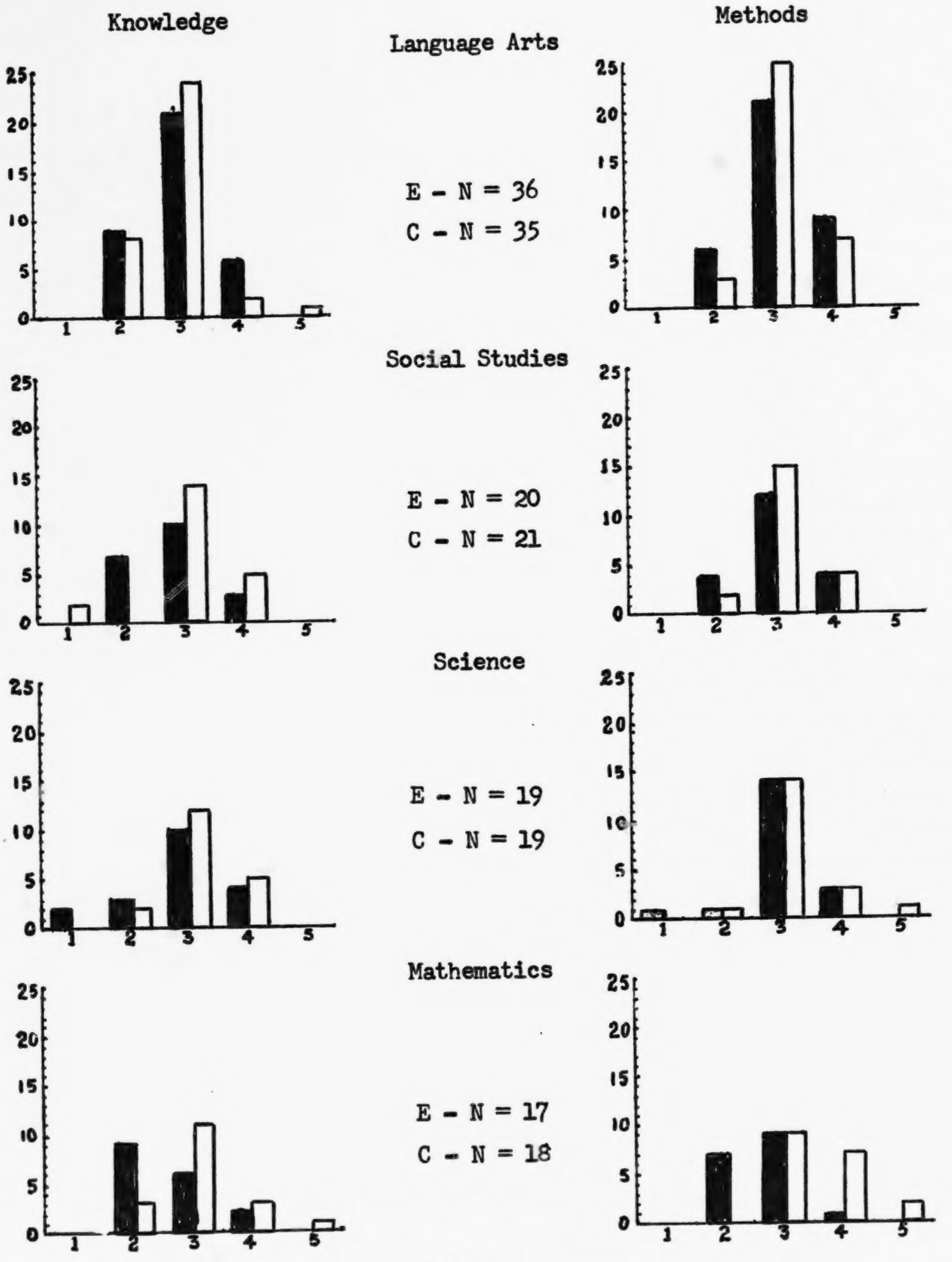

FIGURE 1

QUALITY OF PERFORMANCE BY SUBJECT AREAS

Note: a) Numbers on graphs represent the following: 1 —Outstanding
2 —Very Good 3 —Good 4 —Fair 5 —Poor
b) Black bar__ Experimental Group White bar__ Control Group
N = Number
E - N = 29 C - N = 93

TABLE 5

COMPARISON OF DIRECTED DISCOURSE DURING INSTRUCTION
(E - Experimental) (C - Control)

Focus	Group	Subject Matter Area			
		Lang. Arts E-N=36 C-N=35	Social Studies E-N=20 C-N=21	Science E-N=19 C-N=19	Mathe-matics E-N=17 C-N=18
Mood Inducement and Goal Direction	E C	71 62	42 26	28 24	41 34
Presentation of Learning Task	E C	48 45	20 14	16 22	27 25
Structuring an Approach to Learning	E C	63 54	41 31	39 40	37 25
Maintaining Pupil Involvement	E C	80 84	60 54	49 48	44 39
Guiding Pupil Involvement	E C	81 80	63 44	46 51	46 36
Directing Practice	E C	30 23	12 13	11 15	13 14
Transfer of Learning	E C	49 37	27 25	28 20	28 17
Evaluation of Pupils Efforts	E C	62 51	28 32	28 26	24 26
Inviting or Reacting to Pupil Discourse	E C	125 101	86 64	74 78	68 51

Language Arts	Social Studies	Science	Mathematics	Total
2P=.0202[a] (E)W_2=42[c] (C)W_1=3[c]	2P=.0278[a] (E)W_2=41[c] (C)W_1=4[c]	2P=.64[b] (E)W_2=18.5[c] (C)W_1=26.5[c]	2P=.0238[a] (E)W_2=41.5[c] (C)W_1=3.5[c]	2P=.008[a] (E)W_2=45[c] (C)W_1=0[c]

[a] Statistically significant difference Mw[d]=22.5 w[e]=8.4

[b] Difference not statistically different

[c] Sum of ranks

[d] By formula $Mw = \frac{n(n+1)}{4}$

[e] By formula $\sigma w = \sqrt{\frac{n(n+1)\ (2n+1)}{24}}$

The higher incidence of directed discourse of the Experimental Group is readily apparent by inspection. Application of the Wilcoxin tests for the paired case established the significance of difference in the total and in each subject area except science--language arts, 2P = .0202; social studies, 2P = .0278; science, 2P = .64; math, 2P = .0238; total, 2P = .008. Therefore, in their total instructional behavior, in the teaching of the language arts, the social studies, and mathematics, the Experimental Group showed a higher incidence of logical discourse.

Exceptionally large arithmetic differences in certain areas invite comment. For example, the higher incidence of instructional discourse directed toward pupils' "transfer of learning" appears in most subject matter areas and represents one of the most obvious differences in the instructional discourse of the two groups. Of interest also is the incidence of verbalizations of the Experimental Group which invited and/or reacted to pupil discourse. Interestingly, and perhaps significantly, these differences appear in all areas except in the teaching of science.

The investigators hypothesized that trainees who were taught to focus their verbalizations in ways prescribed by the theoretical model also would be rated as displaying more effective teaching behavior than a Control Group. Table 6 presents the observer's ratings of the general teaching performance of the groups and the results of the test of significance. Chi-square was used to test the difference in observer ratings of overall effectiveness. With 2 degrees of freedom the value of chi-square (9.41) is significant beyond the one per cent level, and thereby upholds the investigators' hypothesis. Figure 2 reports graphically the observer's ratings of the instructional behavior of the sample. That a superiority was characteristic of the Experimental Group during the three observations is reflected also in the bar graphs of Figure 2.

The change in the pattern of performance of both groups between Observations I and III is certainly an interesting phenomenon. The decrease in the incidence of "fair" and "poor" ratings is commendable and could be regarded as improvement in performance during the student-teaching experience. However, the corresponding decrease in the number of "very good" ratings and the complete loss of "outstanding" ratings might raise questions in the minds of those charged with supervision of student-teaching and/or selection of critic teachers. (See Appendix H, Tables 12, 13, and 14.)

TABLE 6

COMPARISON RATINGS OF GENERAL INSTRUCTIONAL BEHAVIOR
(E - Experimental, N = 93) (C - Control, N = 93)

Behavior Area	Group	Ratings					
		In-effective	Poor	Fair	Good	Very Good	Out-standing
Knowledge	E	0	0	15	52	24	2
	C	0	2	14	62	13	2
Communication	E	0	3	19	55	14	2
	C	0	4	34	45	9	1
Instructional Methods	E	0	0	17	62	13	1
	C	0	2	21	63	7	0
Motivation	E	1	0	24	46	21	1
	C	0	5	22	48	18	0
Discipline	E	0	1	22	44	24	2
	C	0	1	18	41	33	0
Personal Interaction	E	0	0	13	57	22	1
	C	1	0	16	50	26	0

Group	Overall Teaching Effectiveness Ratings					χ^2[b]
	Poor	Fair	Good	Very Good	Out-standing	
Experimental (N=93)	0	19	48	24	2	9.41 2df[a]
Control (N=93)	1	18	64	10	0	

[a] Significant beyond the .01 level
Computed after combining ratings to eliminate cells with less than 5 entries.

[b] By formula $\chi^2 = \text{sum of } \frac{(\text{observed-expected frequencies})^2}{\text{expected frequencies}}$

Group	Adaptability Ratings					χ^2[b]
	Poor	Fair	Good	Very Good	Out-standing	
Experimental (N=90)	2	0	29	58	1	
Control (N=90)	1	2	34	53	0	

[b] Not computed because of minimal dispersion

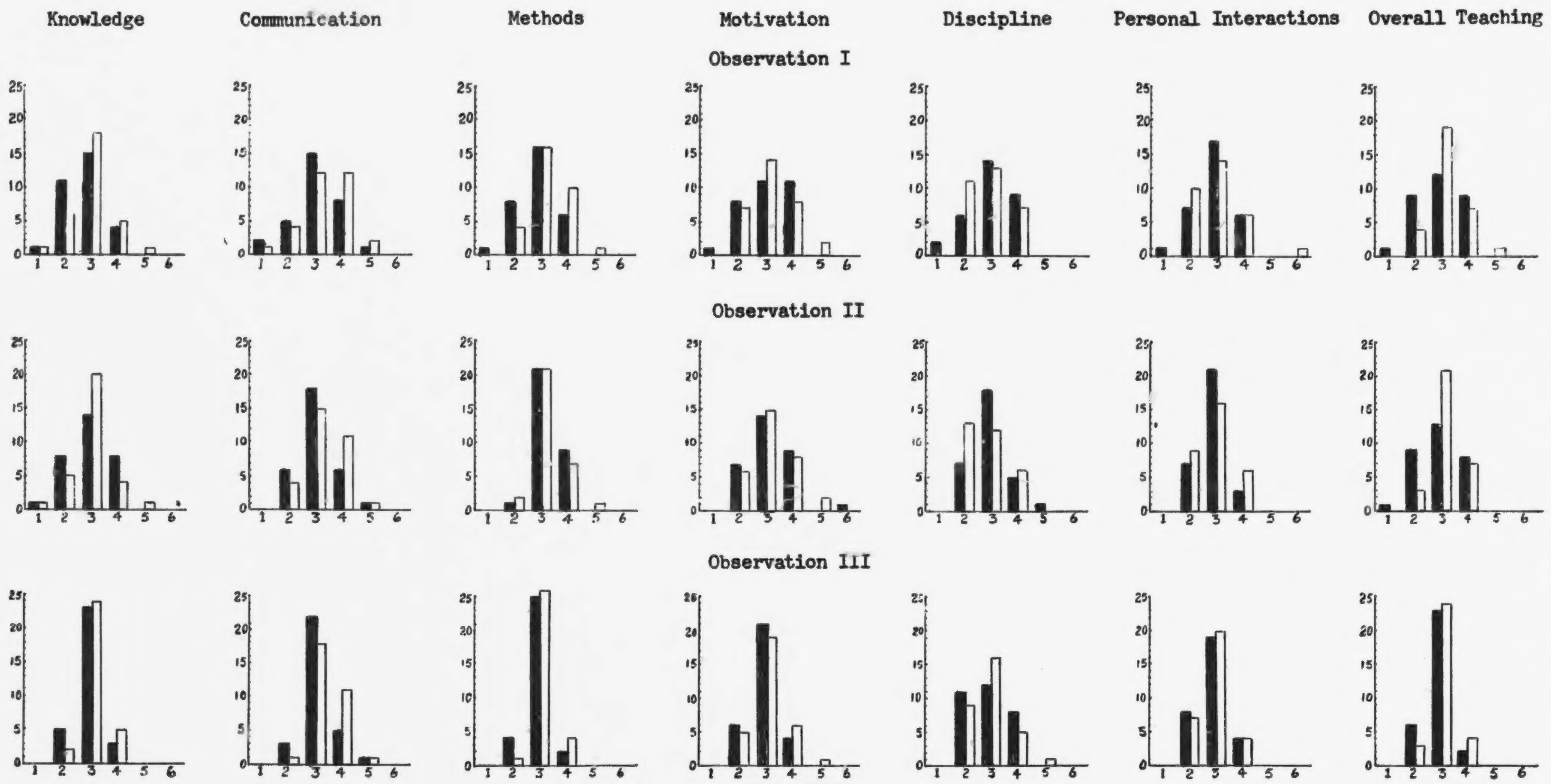

FIGURE 2

QUALITY OF INSTRUCTIONAL BEHAVIOR DURING THREE OBSERVATIONS

Note: a) Numbers on graphs represent the following:

1 —Outstanding	4 —Fair
2 —Very Good	5 —Poor
3 —Good	6 —Ineffective

b) Black bar__ Experimental Group, White bar__ Control Group
N = Number
E - N = 31 C - N = 31

The evaluative instrument--see Teaching Verbal Behavior and Adaptability Record in Appendix D--provided an opportunity for the Observer to note instances of distinctive strengths and weaknesses which the trainees displayed. The results of these notations are reported in Table 7. The superiority of the Experimental Group in its manifestations of noticeable strengths immediately commands attention. The strengths of the group which are reflected in its higher scoring on the tests of the National Teacher Examinations, in greater incidence of directed instructional discourse, and in general instructional performance appear again in Table 7 as instances of outstanding strengths. The outstanding weaknesses of the Experimental Group, too, are entirely consistent with the other data. In spite of its overall strengths, the variability of the Experimental Group is a characteristic that is evidenced by one or more very low scores on several tests of the National Teacher Examinations (See Table 3, Science Test; Table 4, Common Examinations; the Observer's ratings of "ineffective" and "poor" teaching behaviors as reported in Tables 6, 8, and 9.)

The investigators also hypothesized that if teacher-trainees were taught to concentrate during instruction on (a) objectives to be achieved, (b) the psychological principles thought to contribute to the attainment of these objectives, (c) and the phraseology needed to communicate with clarity and precision, rather than on "methods of teaching specific subject areas," their teaching behavior would be rated more effective than a Control Group. Furthermore, efforts toward the attainment of objectives--an often neglected facet of elementary school teaching--would be identifiable and representative of effective teaching.

The data in Table 8 offer complete support to this hypothesis. When the subjects were rated on teaching behavior categorized according to instructional objectives, there was a significant difference in favor of the Experimental Group for each type of objective (psychomotor skills excluded because of the small number of objectives in this area). Chi-square, used to test the significance of difference, required a value of 5.991 for significance at the .05 level. The computed values of chi-square were 7.96 for objectives involving facts; 10.98 for concepts or processes; 9.42 for attitudes and appreciation; and 7.00 for intellectual skills (including problem solving).

TABLE 7

INCIDENCE OF OUTSTANDING STRENGTHS AND WEAKNESSES DURING INSTRUCTION

E - Experimental Group (During 93 Observations)
C - Control Group (During 93 Observations)

Characteristic	Outstanding Strength		Outstanding Weakness	
	E	C	E	C
1. Knowledge and Use of Subject Matter	64	39	13	10
2. Skill in Verbal Communication	61	22	21	33
3. Skill in Non-Verbal Communication	35	10	3	3
4. Use of Instructional Mode (Recitation, Discussion, Laboratory Homework, etc.)	61	36	20	21
5. Use of Instructional Media	47	24	1	4
6. Adaptability to Situational Changes	46	27	1	2
7. Skill in Preventing or Coping with Disruptive Classroom Behavior	62	36	21	14
8. Skill in Creating a Generally Conducive Learning Atmosphere	41	7	1	2
9. General Personal Appeal	41	27	2	1
10. Skillful Interaction with Pupils	61	35	7	8

TABLE 8

COMPARISON RATINGS OF OVERALL TEACHING EFFECTIVENESS ACCORDING TO INSTRUCTIONAL OBJECTIVES

E - Experimental Group (During 93 Observations)
C - Control Group (During 93 Observations)

Objective	Group	Ratings						Total	χ^2[a]
		Ineffective	Poor	Fair	Good	Very Good	Outstanding		
Factual Information	E C	0 0	0 3	17 17	48 39	22 6	1 0	88 65	7.96 2df[b]
Concepts or Processes	E C	0 0	0 3	15 15	45 48	28 8	1 0	89 74	10.98 2df[c]
Intellectual Skills (including problem solving)	E C	0 0	0 2	11 6	16 22	14 4	1 0	42 34	7.00 2df[b]
Psychomotor Skills (including handwriting)	E C	0 0	0 0	0 2	2 3	4 2	0 0	6 7	()[d]
Attitudes and Appreciations	E C	0 0	0 2	5 8	34 18	12 2	1 0	52 30	9.42 2df[c]

[a] Computed after combining ratings to eliminate cells with fewer than 5 entries. By formula

$$\chi^2 = \text{sum of } \frac{(\text{observed-expected frequencies})^2}{\text{expected frequencies}}$$

[b] Significant at or beyond .05
[c] Significant beyond .01
[d] Not computed because of small numbers

TABLE 9

SUMMARY OF OBSERVER'S EVALUATION OF GENERAL INSTRUCTIONAL BEHAVIOR BY SUBJECT

(E - Experimental, N = 92) (C - Experimental, N = 93)

Subject	Group	Ratings				
		Out-stand-ing	Very Good	Good	Fair	Poor
E=N=36 C=N=35						
Lang. Arts Knowledge	E	0	9	21	6	0
	C	0	8	24	2	1
Methods	E	0	6	21	9	0
	C	0	3	25	7	0
E=N=20 C=N=21						
Soc. Studies Knowledge	E	0	7	10	3	0
	C	2	0	14	5	0
Methods	E	0	4	12	4	0
	C	0	2	15	4	0
E=N=19 C=N=19						
Science Knowledge	E	2	3	10	4	0
	C	0	2	12	5	0
Methods	E	1	1	14	3	0
	C	0	1	14	3	1
E=N=17 C=N=18						
Arithmetic Knowledge	E	0	9	6	2	0
	C	0	3	11	3	1
Methods	E	0	7	9	1	0
	C	0	1	9	7	1

Findings

Specific questions regarding differences in the group were set forth in the statement of the problem. Answers to these questions are submitted in summary of the analyses which were made during the investigation. Differences between the groups in designated areas of performance are reported below.

1. In general achievement:

   (a) Arithmetic differences, favoring the Experimental Group, were found to be significant in written English, and in the combinational area of social studies, literature, and fine arts.

   (b) An arithmetic difference, which favored the Experimental Group, was found too small for statistical significance in the combinational area of science and mathematics.

2. In knowledge of professional information:

   Arithmetic differences, favoring the Experimental Group, were found to be of statistical significance.

3. In knowledge of elementary school subject matter:

   When the groups were tested for knowledge of elementary school subject matter combined with methods, arithmetic differences favoring the Experimental Group were too small to reach statistical significance.

4. In the logic of their classroom discourse:

   (a) When teaching behavior was rated according to subject matter areas, significant differences in directed discourse were found to favor the Experimental Group in their teaching of language arts, social studies, and mathematics. No significant difference was found between the groups in their discourse during the teaching of science.

   (b) When discourse was analyzed according to instructional objectives, significant differences favoring the Experimental Group were found during the teaching of (1) factual information; (2) concepts and/or processes; (3) intellectual skills; (4) attitudes and appreciation.

   (c) During instruction, the discourse of the Experimental Group was found to contain an exceptionally high incidence of verbalizations that (1) invited and/or reacted to pupil discourse; (2) were designed to facilitate pupils' transfer of learning.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results of analysis of data afford several specific conclusions and recommendations related to the problems studied in this investigation. The major conclusions are as follows:

1. The Experimental Approach and the Traditional Approach as described herein are equally productive in the following combinational subject area representative of general educational background preparation for teaching--science and mathematics.

2. The described Experimental Approach is apparently superior in productivity to the described Traditional Approach in Written English expression and the combinational area of social studies, literature and fine arts. This area is representative of general educational background preparation for teaching.

3. The described Experimental Approach is apparently superior to the described Traditional Approach in providing elementary teacher-trainees with appropriate knowledge of professional information.

4. The Traditional Approach and the Experimental Approach, as described herein, are equally productive in providing elementary teacher-trainees with appropriate knowledge of elementary school subject matter combined with methods.

5. The described Experimental Approach, as compared with the described Traditional Approach, prepares elementary teacher-trainees whom an observer will rate as superior in knowledge of subject matter and methods in all areas--language arts, social studies, science and mathematics.

6. The described Experimental Approach, as compared with the described Traditional Approach, prepares elementary teacher-trainees who demonstrate a higher incidence of directed instructional discourse, the apparent result of which is more effective teaching.

7. The theoretical model of teacher classroom behavior, constituting as it does the major focus of the Experimental Approach, must be judged as the most significant contributor to the superiority of the Experimental Approach.

Recommendations

As a result of the findings and conclusions of this study, the following recommendations are offered:

1. The described Experimental Approach, having proved generally superior to the described Traditional Approach in this investigation, should be demonstrated and further perfected at several institutions which specialize in preparing elementary school teachers of culturally deprived children.

2. Institutions preparing secondary teachers should study the nature and findings of this investigation and consider devising a similar approach for training secondary teachers.

3. The Teacher Verbal Behavior and Adaptability Record, the observer-rating instrument devised and used in this investigation, should be used (a) to evaluate trainee teaching behavior at the end of practicum experiences and (b) to instruct trainees during personal conferences and on-campus seminars which are parts of the student-teaching period.

4. There should be additional experimentation on the effectiveness of training teachers--elementary and secondary--using the theoretical model of teacher classroom behavior described in this investigation.

REFERENCES

1. Adler, Henry L., and Roessler, Edward B. Introduction to Probability and Statistics. San Francisco: W. H. Freeman and Co., 1960.

2. Anderson, G. Lester. "Professional Education: Present Status and Continuing Problems." Education for the Professions. Chapter I, Edited by Nelson D. Henry, Chicago: University of Chicago Press, 1962.

3. Benson, Arthur L. "A Teaching Profession Dedicated To What?" A Presentation to the General Assembly of Florida State Teachers' Association's 73rd Convention, March 15, 1963, (Copyright, 1963).

4. Bruner, Jerome S. The Process of Education. Cambridge: Harvard University Press, 1961.

5. ________. "Some Theorems on Instruction Illustrated with Reference to Mathematics." Theories of Learning and Instruction. Chapter XIII, Edited by Ernest L. Hilgard, Chicago: University of Chicago Press, 1964.

6. Campbell, D. T., and Stanley, J. C. "Experimental and Quasi-Experimental Designs for Research on Teaching." N. L. Gage (ed), Handbook of Research on Teaching. Chicago: Rand McNally, 1963.

7. Cantor, Nathaniel. The Teaching-Learning Process. New York: The Dryden Press, 1953.

8. Cheers, Arlynne L. "Reports of the Performance of Grambling College Seniors on NTE 1958-1961." Grambling College, Grambling, Louisiana, 1961. (Mimeographed)

9. ________, and Carter, Lamore J. "Toward the Professional Preparation of Elementary School Teachers." Grambling College, Grambling, Louisiana, 1968. (Mimeographed)

10. The Comprehensive College Tests. Princeton: Educational Testing Service, 1965.

11. Cooper, Russell M., and Mayhew, Lewis B., and others. "The Education Program." Review of Educational Research. Vol. XXX, No. 4; 334-350; October, 1960.

12. *The Cooperative English Tests*. Princeton: Educational Testing Service, 1960.

13. Cottrell, Donald T., ed. *Teacher Education for a Free People*. Oneonta, New York: The American Association of Colleges for Teacher Education, 1956.

14. Cronbach, Lee J. *Educational Psychology*. New York: Harcourt, Brace and Co., 1954.

15. Dressel, Paul L. "The Meaning and Significance of Integration." *The Integration of Educational Experiences*. Edited by Nelson B. Henry, Chicago: The University of Chicago Press, 1958.

16. Dressel, Paul L. *The Undergraduate Curriculum in Higher Education*. Washington: The Center of Applied Research in Education, Inc., 1963.

17. Emlaw, Rita and others. "Teacher Effectiveness: A Method of Prediction and Evaluation." *National Elementary Principal*. Vol. 43: 38-49, November, 1963.

18. Gage, N. L. "Paradigms for Research on Teaching." *Handbook of Research on Teaching*. Edited by N. L. Gage, Chicago: Rand McNally Co., 1963.

19. Hill, George B., and Pettholf, Edward F., eds. *Improving Teacher Education Through Inter-College Cooperation*. Dubuque, Iowa: William C. Brown Co., 1957.

20. Howsan, Robert B. *Who's A Good Teacher: Problems and Progress in Teacher Evaluation*. Burlingame: California Teachers Association, 1960.

21. Mayhew, Lewis B. "Illustrative Courses and Programs in Colleges and Universities." *Integration of Educational Experiences*. Edited by Nelson D. Henry, Chicago: The University of Chicago Press, 1958.

22. Medley, Donald M., and Mitzel, Harold E. "Measuring Classroom Behavior by Systematic Observation." *Handbook of Research on Teaching*. Edited by N. L. Gage, Chicago: Rand McNally Co., 1963.

23. Meux, M., and Smith, B. O. *Logical Dimensions of Teaching Behavior*. Urbana: Bureau of Educational Research, University of Illinois, 1961. (Mimeographed)

24. National Teacher Examinations. Princeton: Educational Testing Service, 1967.

25. Redefer, Frederick L. "Teacher Evaluation: Unfinished Studies and Unanswered Questions." National Elementary Principal. Vol. 43: 63-74, November, 1963.

26. Remmers, H. H. "The Second Report of the Committee on Teacher Effectiveness." Review of Educational Research. Vol. 46: 641-58, May, 1953.

27. Rose, Gale W. "Performance Evaluation and Growth in Teaching." Phi Delta Kappan. Vol. 45: 48-53, October, 1963.

28. Russell, David H., and Richardson, Syline K. (co-chairmen). Learning and the Teacher. Washington: The Association for Supervision and Curriculum Development (1959 Yearbook), 1959.

29. Sarason, Seymour E., Davidson, Kenneth, and Blatts, Burton. The Preparation of Teachers. New York: John Wiley and Sons, Inc., 1962.

30. School and College Ability Test. Princeton: Educational Testing Services, 1958.

31. Smith, B. Othanel and others. A Tentative Report on the Strategies of Teaching. U. S. Department of Health, Education and Welfare; Office of Education; Cooperative Research Project No. 1640. Urbana: Bureau of Educational Research, College of Education, University of Illinois, 1964.

32. Stickler, W. Hugh. "Senior Courses in General Education." Journal of Higher Education. Vol. 25: 139-46, 171; March, 1954.

33. Stinnett, T. M., and Clarke, Charles M. "Teacher Education Programs." Encyclopedia of Educational Research. (3rd ed.) Edited by C. H. Harris. New York: MacMillan Co., 1960.

34. Stolurow, Lawrence M. "Model the Master Teacher or Master the Teaching Model." Learning and the Educational Process. Edited by John D. Krumboltz. Chicago: Rand McNally and Co., 1965.

35. Turner, Richard L., and Fattu, Nicholas A. "Skill in Teaching: A Reappraisal of the Concepts and Strategies in Teacher Effectiveness Research." Bulletin of the School of Education, Indiana University, Vol. 36, No. 3, May, 1960.

36. Waimon, Morton. "The Study of Teaching Behavior at Illinois State University." The Study of Teaching. Edited by Dean Corrigan. Washington, D. C.: The Association for Student Teaching, 1967.

37. Wallen, Norman E., and Travers, Robert M. W. "Analysis and Investigation of Teaching Methods." Handbook of Research on Teaching. Edited by N. L. Gage, Chicago: Rand McNally Co., 1963.

APPENDIXES

Appendix A

GENERAL EDUCATION REQUIREMENTS FOR ELEMENTARY EDUCATION MAJORS

48/

GENERAL EDUCATION REQUIREMENTS FOR ELEMENTARY EDUCATION MAJORS

G. S. 100 - Orientation to College Life	1 Semester hour

English

English 101, 102 - Fundamentals of Written and Spoken English	6 Semester hours
English 200 - World Literature	3 Semester hours

Social Studies

Hist. 101 - American History	3 Semester hours
Soc. 101 - The Community	3 Semester hours
Economics 200 - Basic Economics	3 Semester hours
Pol. Sci. 201 - American Government	3 Semester hours
Geo. 200 - Intro. to Geography	3 Semester hours

Natural Sciences

Gen. Sci. 101, 102 - Survey of Biological Sciences	6 Semester hours
Gen. Sci. 201, 202 - Survey of Physical Science	6 Semester hours

Mathematics

Math. 101, 102 - General Mathematics	6 Semester hours
TOTAL SEMESTER HOURS	43 Semester hours

Appendix B

EXPERIMENTAL TESTING

SAMPLE

EDUCATION PROJECT 2930
Division of Education
Grambling College
Grambling, Louisiana

February 16, 1967

Dear Project Participant:

In order to continue as a participant in Project 2930 and to receive all advantages, rights and privileges therefrom, you must take the project pre-test. This test will require 6 hours of your time and may be taken 2 hours at a time during the week of February 20-25. You should study the scehdule of test administrations listed below and go to the Testing Center (Mrs. Payne is in charge) at times when you can sit for two hours or more.

Schedule of Test Administrations
Testing Center

8:00 a.m. - 10:00 a.m. - M T W Th F (S)

9:00 a.m. - 11:00 a.m. - M T W Th F (S)

10:00 a.m. - 12:00 p.m. - M T W Th F (S)

1:00 p.m. - 3:00 p.m. - M T W Th F

2:00 p.m. - 4:00 p.m. - M T W Th F

3:00 p.m. - 5:00 p.m. - M T W Th F

Sincerely,

Arlynne L. Cheers, Co-Director
Project 2930

Lamore J. Carter, Co-Director
Project 2930

/m

TABLE 10

RAW SCORES OF EXPERIMENTAL GROUP

Student Code Nos.	Tests Scores																	
	Nat. Tch. Exams	Wtd. Com. Exam.	Prof. Ed. Test	Gen. Ed. Tests	1. Writ. Eng. Exp.	2. Soc. Std., Lit. & Fine Arts	3. Sci. & Math	Tch. Area Exam.	SCAT (total score)	Coop. Eng. Test	Rd. Comp.	Eng. Exp.	Comp. Coll. Tests	English	Nat. Science	Mathematics	Humanities	Soc. Sci. & Hist.
1		464	43		56	45	48	540	276		136	138		370	411	360	332	407
2		413	45		47	38	36	450	264		139	136		290	368	344	380	325
3		516	54		52	53	46	550	284		142	149		393	417	352	413	407
4		468	47		45	39	55	500	293		138	144		336	374	391	337	363
5		437	51		46	37	38	520	274		138	144		284	385	344	451	374
6		513	57		49	45	50	530	291		140	140		399	487	391	494	423
7		477	50		47	42	50	490	280		141	142		405	406	360	451	374
8		520	48		44	57	57	550	275		138	141		295	497	352	434	423

TABLE 10--Continued

9	375	36	41	42	34	530				336	374	344	353	352
10	401	37	38	42	44	450	264	135	135	284	282	344	348	336
11	474	57	50	50	38	550	280	144	142	416	395	407	364	358
12	473	48	55	45	45	530	271	135	135	399	390	344	375	385
13	533	58	54	42	57	520	274	135	133	411	481	407	413	462
14	501	52	69	45	44	600	284	150	151	434	428	391	407	440
15	383	29	41	40	50	490	273	140	142	232	304	367	326	341
16	506	53	49	44	54	550	283	149	147	411	508	399	397	423
17	530	61	45	49	48	530				439	401	360	391	467
18	514	55	67	47	43	578	287	150	151	411	390	352	397	401
19	403	38	50	39	41	440	266	136	136	278	282	415	342	347
20	463	49	43	48	42	570	277	140	138	347	433	383	386	369
21	523	55	53	49	51	510	274	142	139	411	395	360	407	429
22	570	61	57	54	54	510	260	145	144	457	401	439	370	363
23	442	44	39	46	45	460	279	142	147	284	465	391	445	401
24	390	32	39	41	48	450	260	129	129	353	363	344	386	429

TABLE 10--Continued

Student Code Nos.	Tests Scores													
	Nat. Tch. Exams						SCAT (total score)	Coop. Eng. Test		Comp. Coll. Tests				
	Wtd. Com. Exam.	Prof. Ed. Test	Gen. Ed. Tests			Tch. Area Exam.		Rd. Comp.	Eng. Exp.	English	Nat. Science	Mathematics	Humanities	Soc. Sci. & Hist.
			1. Writ. Eng. Exp.	2. Soc. Std., Lit. & Fine Arts	3. Sci. & Math									
25	488	47	61	46	49	530	290	145	149	491	449	344	380	396
26	339	28	36	37	39	440				238	363	344	326	379
27	459	45	48	45	47	490	268	140	139	347	358	344	375	423
28	442	42	37	44	51	490	277	141	141	399	342	375	429	358
29	478	54	45	39	48	530	288	141	140	411	422	399	375	341
30	471	51	47	45	43	540	272	145	140	382	331	360	402	396
31	433	45	36	42	45	460	276	138	139	359	385	344	342	379

TABLE 11

RAW SCORES OF CONTROL GROUP

Student Code Nos.	Tests Scores													
	Nat. Tch. Exams						SCAT (total score)	Coop. Eng. Test		Comp. Coll. Tests				
	Wtd. Com. Exam.	Prof. Ed. Test	Gen. Ed. Tests			Tch. Area Exam.		Rd. Comp.	Eng. Exp.	English	Nat. Science	Mathematics	Humanities	Soc. Sci. & Hist.
			1. Writ. Eng. Exp.	2. Soc. Std., Lit. & Fine Arts	3. Sci. & Math									
1	475	48	39	49	49	510	284	139	138	382	336	367	456	379
2	513	54	47	49	51	550	270	141	142	284	331	344	359	379
3	390	36	36	35	49	480	278	136	143	434	374	375	397	369
4	363	38	39	31	38	460	268	131	135	313	309	344	359	363
5	426	45	43	33	48	450	273	132	135	376	422	344	424	358
6	481	48	54	46	48	560	287	142	145	439	336	360	434	390
7	481	41	40	49	40	520	279	144	146	318	449	391	429	369
8	560	61	47	51	57	590	297	153	142	411	514	415	445	396

TABLE 11 --Continued

9	388	35	37	37	47	480	280	140	139	238	352	344	397	352
10	392	36	36	33	52	450	260	137	136	399	315	383	364	374
11	500	49	51	44	57	470	276	139	147	428	395	399	407	423
12	396	40	32	38	44	470	260	131	134	365	315	344	375	325
13	452	51	55	38	39	480	281	139	140	462	293	344	348	363
14	445	48	44	38	46	490	280	149	152	422	433	344	380	379
15	421	43	46	39	42	590	262	133	134	341	433	375	402	347
16	458	52	53	41	42	570	266	137	139	353	411	344	429	396
17	423	50	41	46	47	520	278	145	140	434	325	367	337	325
18	391	42	40	37	36	420	260	133	136	249	304	415	370	347
19	447	46	39	43	47	470	274	135	135	359	390	391	375	407
20	453	46	40	51	41	490	267	139	135	138	417	344	413	418
21	388	48	49	39	49	480	275	136	138	365	401	352	348	396
22	355	28	33	38	46	400	260	137	135	405	395	367	326	374
23	404	38	33	39	49	470	260	133	133	272	390	375	332	358
24	426	40	45	42	46	510	266	136	132	318	358	375	380	369

TABLE 11--Continued

Student	Tests Scores													
	Nat. Tch. Exams							SCAT (total score)	Coop. Eng. Test		Comp. Coll. Tests				
	Wtd. Com. Exam.	Prof. Ed. Test	Gen. Ed. Tests				Tch. Area Exam.		Rd. Comp.	Eng. Exp.	English	Nat. Science	Mathematics	Humanities	Soc. Sci. & Hist.
			1. Writ. Eng. Exp.	2. Soc. Std., Lit. & Fine Arts	3. Sci. & Math										
25	456	41	49	41	56		510	274	139	136	290	460	344	359	374
26	384	33	32	42	46		480	267	132	131	295	363	344	359	418
27	439	44	45	42	45		540				295	352	344	342	401
28	442	42	37	46	49		460	270	140	138	284	417	375	332	352
29	505	49	51	47	56		560	269	128	125	388	438	360	380	429
30	453	43	48	40	53		510	268	138	136	301	476	383	434	363
31	399	33	36	43	49		420	275	148	143	272	336	344	402	341

Appendix C

EDUCATIONAL QUALIFICATIONS OF STAFF PERSONNEL

EDUCATIONAL QUALIFICATIONS
OF INSTRUCTIONAL PERSONNEL

Traditional Approach	Experimental Approach
1. Charles A. Berry Doctorate degree; 20 yrs. exp. (Ed. Psy. & Tests & Measurements)	1. Arlynne L. Cheers Doctorate degree; 20 yrs. exp. (Ed. Psy., & Measurements)
2. J. W. Grantham Doctorate degree; 20 yrs. exp. (Ed. Psy. & Tests & Measurements)	2. Lamore J. Carter Doctorate degree; 20 yrs. exp. (Ed. & Experimental Psy.)
3. Juanita Foster Master's degree, plus 1 yr.; 20 yrs. exp. (Elem. Ed. Curriculum & Methods --Language Arts)	3. Anita D. Auzenne Master's degree, plus 1½ yrs.; 20 yrs. exp. (Social Studies)
4. Frank G. Bonner Master's degree, plus 1½ yrs.; 20 yrs. exp. (Elem. Ed. Curriculum & Methods --Mathematics)	4. Willie J. Wright Master's degree, plus 1 yr.; 10 yrs. exp. (Mathematics)
5. Helen L. Richards Doctorate degree; 20 yrs. exp. (Elem. Ed. Curriculum & Methods --Science)	5. Thomas Odom Master's degree, plus 1 yr; 15 yrs. exp. (Natural Sciences)
6. Sara M. Williams Doctorate degree; 20 yrs. exp. (Elem. Ed. Curriculum & Methods --Social Studies)	6. Alice B. Smith (First Semester), Master's degree, plus 1 yr.; 20 yrs. exp. (Children's Literature) and Hazel J. Jones (Second Semester), Master's degree, plus 1 yr.; 20 yrs. exp. (Children's Literature)
7. Estella Clark Master's degree, plus 1 yr.; 20 yrs. exp. (Elem. Ed. Curriculum & Methods --Children's Literature)	7. Geneva Newport (First Semester), Doctorate degree; 20 yrs. exp. (Language Arts) and Eva Pearl Lewis (Second Semester), Doctorate degree; 20 yrs. exp. (Language Arts)

Appendix D

TEACHER VERBAL BEHAVIOR AND ADAPTABILITY RECORD

TEACHING BEHAVIOR RESEARCH

PROJECT NO. 2930
GRAMBLING COLLEGE
GRAMBLING, LOUISIANA 71245

TEACHER'S VERBAL BEHAVIOR AND ADAPTABILITY

Observer ______________ Teacher or Trainee ______________

Date ______________ School ______________
City State

Hour ______________ Grade ________ Subject ________

The teacher's classroom behavior is observed, evaluated and recorded in this booklet, which contains:

I. TEACHER VERBAL BEHAVIOR OBSERVATION RECORD
II. OBSERVER–JUDGE'S COMMENTS
III. OBSERVER–JUDGE'S EVALUATION

The observer-judge should complete Part I during his observation of the teacher in the classroom, and Parts II and III immediately following the observation.

General Directions

The observer who uses this Teacher Verbal Behavior Observation and Adaptability Record will have had a lengthy training period including theoretical orientation, practice sessions and evaluations in order to establish consistency of choice and rating of entries.

The trainee or teacher to be observed will have been notified one day, at least, before the observer comes to the classroom to observe.

The observer will be present when a lesson begins and will remain throughout the lesson.

For each lesson the observer will make use of a separate record and evaluation form and will make entries in detail according to training stipulations.

Instructions to Observer

During each visit to a teacher's classroom you are to make observations for a total of 36 minutes. These 36 minutes are to be considered as three separate 12-minute observation and marking periods. The three periods are indicated by the sub-columns headed I, II, and III. Throughout each period the teacher's verbal behavior during instruction is to be observed, recorded and rated. Each observed behavior is to be indicated by circling the number of the behavior item which most nearly describes it; the order of the occurrence of the behavior is to be shown by a sequential listing of circled numbers; the evaluation of each behavior during a 12-minute marking period is to be reported by ratings of "Good," "Fair," "Poor," or "Indistinct" ("G," "F" "P," "I.")

Specifically your task consists of:

1. Indicating each observed teacher behavior which is represented by a "Behavior Item."
2. Indicating under "Sequence" the order in which the behaviors occur.
3. Showing ratings of observed behaviors in the appropriate "Periods."

Note: A behavior item should be circled or rated only once in a 12-minute marking period.

The First 12-Minute Period

Begin the first period by observing the teacher for 3 to 5 minutes without making any record. Then begin circling the number of each behavior item as the behavior occurs, indicating in the Sequence Column the order of its occurrence and its rating in sub-column I. Example: Item # 1.10 may be the first observed and Item # 2.10 next, followed by Item # 1.12. You should circle the number "1.10" and place a circled "1" to the left of "1.10" in the

Sequence Column and a rating of this behavior in sub-column I. Then circle the number "2.10," placing a circled "2" to its left in the Sequence Column and a rating in sub-column I. The number "1.12" should then be circled, a circled "3" placed to its left in the Sequence Column and a rating of this behavior in sub-column I.

The Second 12-Minute Period

Repeat the process, indicating the occurrence of behaviors and the order of occurrence.

1. As a behavior occurs, if it has not been previously observed, circle the number of the behavior item. Indicate the order of its occurrence by continuing the numbering sequence which was begun during the first period. (Continue the sequence, do not go back to 1). Show a rating of each behavior observed by placing the appropriate alphabet in sub-column II.
2. If a behavior item has been circled during the previous period (or previously during this period), you will need only to place the appropriate circled number indicating sequence in the Sequence Column.

The Third 12-Minute Period

Repeat the process, indicating the occurrence of behaviors and the order of occurrence.

1. As a behavior occurs, if it has not been previously observed, circle the number of the behavior item. Indicate the order of its occurrence by continuing the numbering sequence which was used during the second period. (Continue the sequence, do not go back to 1). Show a rating of each behavior observed by placing the appropriate alphabet in sub-column III.
2. If a behavior item has been circled during the previous period (or previously during this period), you will need only to place the appropriate circled number indicating sequence in the Sequence Column.

I

TEACHER VERBAL BEHAVIOR OBSERVATION RECORD

The instructional sequence is presented in Phases (I, II, III and IV) and the items indicating the teacher's verbal behavior are numbered from 1.10 through 4.16. The marking periods are designated by sub-columns headed I, II and III.

Scoring Procedure

Circle the number of each Behavior Item as the behavior is observed, then list the order of its occurrence in the Sequence Column. Next, rate the behavior (G, F, P, or I), and record the rating in its appropriate place in the Periods Column. See "Classification of Instructional Objectives" at the bottom of Page # 5. Place an "X" mark beside each item which represents your impression of the teacher's instructional objectives.

Periods			Sequence	Verbal Behavior Items
I	II	III		
				(Phase I) I. Initiation and Structuring of Learning Motives The teacher energizes the drive to learn and directs it toward the ends described in the instructional objectives
				1.10 teacher calls for attention
				1.11 teacher gives instruction
				1.12 teacher states goals
				1.13 teacher points out importance of goals
				1.14 teacher invites pupils to react to goals
				(Phase II) II. Initiation and Structuring of Learning Activities The teacher helps pupils see what is to be learned and how to proceed to learn it.
				2.10 teacher clarifies a task
				2.11 teacher defines a problem
				2.12 teacher provides a model or example of learning task 2.120 teacher gives a demonstration 2.121 teacher gives a definition 2.122 teacher gives an explanation
				2.13 teacher provides cues 2.130 teacher helps pupils recall subject matter 2.131 teacher helps pupils demonstrate comprehension of subject matter
				2.14 teacher tells pupils how/where to find new information
				2.15 teacher helps pupils apply subject matter to problem solving
				2.16 teacher reinforces responses which indicate that pupils understand learning task and how to proceed to learn it

Periods			Sequence	Verbal Behavior Items
I	II	III		
				(Phase III) III. Maintenance/Guidance of a Pupil's Involvement in Learning Activity The teacher helps the pupils to continue moving toward the goal and guides their efforts for effectiveness in learning.
				3.10 teacher provides information (facts, rules, steps in process etc.)
				3.11 teacher asks for questions
				3.12 teacher encourages a pupil to interpret (give reason, show relationship, draw conclusion or give analogy)
				3.13 teacher restates a pupil's verbal response
				3.14 teacher encourages a pupil to apply previously learned facts or principles to new situation
				3.15 teacher, by questions, requires support of adequacy of a pupil's response
				3.16 teacher questions a pupil about the adequacy of his response ("Are you sure?") or teacher directs a pupil to evaluate his response
				3.17 teacher raises questions about "approximations" to a model
				3.18 teacher encourages a pupil to analyze facts, conclusions, etc., pointing up errors, bias, etc.
				3.19 teacher encourages a pupil to synthesize (create a product of his own, formulate hypothesis).
				3.20 teacher asks a pupil to describe design of apparatus or structure
				3.21 teacher encourages a pupil to put his ideas to a test
				3.22 teacher approves or rejects a pupil's response
				3.23 teacher prevents a pupil from changing the task (teacher asks halt of drift or shift in learning tasks)
				3.24 teacher withholds comment

Periods			Sequence	Verbal Behavior Items
I	II	III		
				(Phase IV) **IV. Evaluation and Reinforcement of Learning Acts** The teacher (1) provides means/opportunity for pupils to demonstrate learning, (2) judges the quality of performance, and (3) provides or withholds reinforcement for learning.
				4.10 teacher requires a demonstration of new learning
				4.11 teacher requires pupils to relate a generalization involving the newly acquired comprehension or skill and an older comprehension or skill
				4.12 teacher asks for evidence of transfer (in order to evaluate)
				4.13 teacher communicates to pupils his evaluation of the adequacy of their efforts in the learning task
				4.14 teacher communicates to pupils his evaluation of the adequacy of their achievement of the learning task
				4.15 teacher denotes his pleasure with the efforts expended and learning achieved
				4.16 teacher tells of added benefits of new learning

CLASSIFICATION OF INSTRUCTIONAL OBJECTIVES (S)

The teacher's primary purpose(s) seemed to have been that pupils would:

1. Acquire certain fundamental factual information (__________)
2. Understand certain concepts and/or processes (__________)
3. Develop certain intellectual skills (__________)
4. Develop certain psychomotor skills (__________)
5. Develop certain attitudes and appreciations (__________)

II

OBSERVER–JUDGE'S COMMENTS

Comments on Objectives: (Describe as clearly as you can just what the teacher's objectives were.)

General Comments: (Note each break in the regular instructional sequence. Explain what, if any, effect this break had on the children's learning and give your interpretation as to why.)

Section II (continued)

Up to this point your observations have been restricted by the dimensions of the instrument provided for you. On this page you are asked to express yourself freely, in frames of reference of your own choosing, regarding the classroom performance you have just observed. The headings below are only suggestive. Feel free to ignore them or to cross them out and substitute your own and/or use additional space for writing if you wish.

Outstanding Strengths:

Outstanding Weaknesses:

III

OBSERVER–JUDGE'S GENERAL EVALUATION OF TEACHER

On the basis of this observation how would you rate the ability of this teacher? Check the column which best represents your evaluation of each of the areas listed below.

Quality of General Performance

	Outstanding	Very Good	Good	Fair	Poor	Ineffective
1. Knowledge and Use of Subject Matter						
2. Communication Skills						
3. Instructional Methods						
4. Motivation of Pupils						
5. Discipline of Pupils						
6. Personal Interactions with Pupils						
7. Overall Teaching Effectiveness						

Quality of Adaptability

How effective is this teacher in coping with suddenly developing problems encountered in classroom teaching? Circle the term which best represents your estimation.

Completely Very Moderately Somewhat Barely Not at all

FORM FOR REPORTING DIRECTED INSTRUCTIONAL DISCOURSE

(This is a re-grouping of behavior items as they appear on the evaluative instrument, Teacher Verbal Behavior and Adaptability Record.)

Motivation (Mood Inducement and Goal Directing)

1.10 teacher calls for attention
1.11 teacher gives instruction
1.12 teacher states goals
1.13 teacher points out importance of goals
1.14 teacher invites pupils to react to goals

Presenting the Learning Task

2.10 teacher clarifies a task
2.11 teacher defines a problem
2.12 teacher provides a model or example of learning task
    2.120 teacher gives a demonstration
    2.121 teacher gives a definition
    2.122 teacher gives an explanation

Structuring an Approach

2.13 teacher provides cues
    2.130 teacher helps pupils recall subject matter
    2.131 teacher helps pupils demonstrate comprehension of subject matter
2.14 teacher tells pupils how/where to find new information
2.15 teacher helps pupils apply subject matter to problem solving
2.16 teacher reinforces responses which indicate that pupils understand learning task and how to proceed to learn it

Maintaining Pupil Involvement

3.10 teacher provides information (facts, rules, steps in process, etc.)
3.11 teacher asks for questions
3.13 teacher restates a pupil's verbal response
3.22 teacher approves or rejects a pupil's response
3.23 teacher prevents a pupil from changing the task (teacher asks halt of drift or shift in learning tasks)
3.24 teacher withholds comment

Guiding Pupil Involvement

3.12 teacher encourages a pupil to interpret (give reason, show relationship, draw conclusion or give analogy)
3.14 teacher encourages a pupil to apply previously learned facts or principles to new situation
3.15 teacher, by questions, requires support of adequacy of a pupil's response
3.16 teacher questions a pupil about the adequacy of his response ("Are you sure?") or teacher directs a pupil to evaluate his response
3.17 teacher raises questions about "approximations" to a model
3.18 teacher encourages a pupil to analyze facts, conclusions, etc., pointing up errors, bias, etc.
3.19 teacher encourages a pupil to synthesize (create a product of his own, formulate hypothesis)
3.20 teacher asks a pupil to describe design of apparatus or structure
3.21 teacher encourages a pupil to put his ideas to a test

Directing Practice

4.10 teacher requires a demonstration of new learning

Transfer of Learning

1.13 teacher points out importance of goals
2.15 teacher helps pupils apply subject matter to problem solving
3.14 teacher encourages a pupil to apply previously learned facts or principles to new situation
4.11 teacher requires pupils to relate a generalization involving the newly acquired comprehension or skill and an older comprehension or skill
4.12 teacher asks for evidence of transfer (in order to evaluate)
4.16 teacher tells of added benefits of new learning

Inviting and Reacting to Pupil Responses

1.14 teacher invites pupils to react to goals
2.16 teacher reinforces responses which indicate that pupils understand learning task and how to proceed to master it
3.11 teacher asks for questions
3.12 teacher encourages a pupil to interpret (give reason, show relationship, draw conclusion or give analogy)
3.13 teacher restates a pupil's verbal response
3.15 teacher, by questions, requires support of adequacy of a pupil's response
3.16 teacher questions a pupil about the adequacy of his response ("Are you sure?") or teacher directs a pupil to evaluate his response

3.20 teacher asks a pupil to describe design of apparatus or structure
3.22 teacher approves or rejects a pupil's response
3.24 teacher withholds comment
4.11 teacher requires pupils to relate a generalization involving the newly acquired comprehension or skill and an older comprehension or skill

Appendix E

THE TRADITIONAL APPROACH

DESCRIPTION OF COURSES COMPRISING THE TRADITIONAL APPROACH

The Traditional Approach consisted of 36 semester hours of college courses currently included in the curriculum sequence required of elementary teacher-trainees.

Seventeen of these 36 semester hours are thought to be contributing directly to the (1) professional information (2) knowledge of substantive content of the elementary school curriculum and (3) classroom behavior of elementary teacher-trainees. The seventeen hours are described in the paragraphs which follow:

Eng. 304--Children's Literature 3 Sem. Hours

Designed for the development of the student's ability to select, interpret, and present literature to children for the greatest returns in enjoyment and in the establishment of permanent reading habits.

Ed. 305--Educational Psychology 3 Sem. Hours

This course emphasizes those aspects of psychology which most immediately apply to teaching. It is primarily concerned with a critical analysis of the learning process, its theoretical foundation, and its application. Among others it considers the following topics: learning and culture, trial and error, conditioned response, insight, reflective thought, creative thought, and applied psychology in teaching.

Ed. 307--Tests and Measurements 3 Sem. Hours

Consideration of the major fields of measurement--intelligence, achievement, personality, interest and aptitude. The selection, administration and scoring of tests, interpreting and utilizing results and understanding frequently used statistical terms.

Ed. 308--Seminar in Elementary Education 8 Sem. Hours

At least one semester on the junior level required of prospective elementary teachers. Methods and materials offered for teaching, specifically the language arts, social studies, natural sciences and arithmetic in the elementary school. Cooperative planning, small and large group discussions, action research and evaluation procedures used. Both lower and upper grades are considered when principles are discussed; however, at certain points, for special emphasis the upper and lower groups are separated. Emphasis is directed to the junior high school for prospective teachers in that area. In all instances the team approach is used.

Observation and Critiques at the Laboratory School will be required at the discretion of the Professors.

DESCRIPTION OF COURSES COMMON TO THE TRADITIONAL AND EXPERIMENTAL APPROACHES

Descriptions of courses common to the Traditional and Experimental Approaches, which yielded nineteen semester hours, follow:

Ed. 306--Reading in the Elementary School 3 Sem. Hours

A course designed to cover a sound and continuing reading development program for grades one through eight. Principles, techniques, materials and laboratory experiences in teaching reading to children in the elementary school. Diagnostic and remedial procedures are given consideration.

Eng. 310--Advanced Composition 3 Sem. Hours

A course designed to develop proficiency in written expression, especially in expository writing. Emphasis placed upon the mechanics of writing, effectiveness of style and the techniques of research.

Art 308--Practical Art 3 Sem. Hours

Application of design principles to articles to be used in the home, classroom, and for personal adornment. Three laboratory hours per week.

Art 309--Practical Art 3 Sem. Hours

A survey course designed to give the student an overview of the art of the western world, interpretation and classification of major styles and artists.

Mus. 320--Music in the Elementary School 3 Sem. Hours

A course designed especially for the Elementary Education Majors. Fundamentals of music, terminology, note reading, keyboard study, and methods of teaching music in the elementary school.

Phy. Ed. 300--Methods and Materials in Elementary Physical Education 2 Sem. Hours

A graded program of selected activities of the elementary school teacher in relation to the school situation and the individual child. A knowledge of general procedures used in class organization and teaching methods.

Electives________________________ 2 Sem. Hours

Appendix F

SPECIAL PROJECT CONSULTANTS

SERVICES OF SPECIAL PROJECT CONSULTANTS

	Consultant	Topics of Lectures	Scheduled Conferences
(1)	Harl R. Douglass, Professor Emeritus, Consultant in Elementary and Secondary Education University of Colorado Boulder, Colorado	"Current Trends and Newer Practices in Education" "The Elementary School Teacher: a Factor in Social Change" (two lectures) "Trends in Secondary Education" "Higher Education and Social Change"	Six with project directors Three with project staff Two hours with individual students Two hours with small groups of students
(2)	Arthur L. Irion, Chairman Psychology Department Tulane University New Orleans	"Relationships Between Psychology and Elementary Education" "Frustration and Its Consequences" "Programmed Instruction and Teaching Machines"	Two with project directors Two hours with small groups of students
(3)	Virginia Carlton Professor of Mathematics Centenary College Shreveport, Louisiana		Two with directors Two with mathematics professor
(4)	Alfreeda DeBerry Supervisor of Instruction in Language Arts Hardeman County, Tennessee Bolivar, Tennessee	"A Systems Approach to Language Arts: Part I" "A Systems Approach to Language Arts: Part II"	Two hours with small groups of students

	Consultant	Topics of Lectures	Scheduled Conferences
(5)	Letisha Jones Consultant in Language Arts South Central Regional Educational Laboratory Little Rock, Arkansas	"A Look at Several Approaches to Language Arts" (two lectures)	None
(6)	Archie L. Lacey Professor of Science Education Hunter College of City University of New York New York, New York	"Innovations in Science for the Elementary School" "A Model for Teaching and Learning in Elementary Grades"	Two with project directors
(7)	Robin McKeown Associate Professor of Social Sciences University of California Berkeley, California	"The Newer Social Studies" "Illustrations of Concept Development in the Social Studies"	Two with project directors Three with social studies professor
(8)	Billie L. Shumate Consultant in Language Arts and Children's Literature Webster College Webster Grove, Missouri	"Children's Literature in the Language Arts" (two lectures)	None
(9)	Herbert F. Spitzer Professor of Mathematics Education State University of Iowa Iowa City, Iowa	"Innovations in Mathematics for the Elementary School" "Characteristics of the New Math"	Two with mathematics professor Two hours with small groups of students

SAMPLE

MEMORANDUM

January 4, 1968

To: Staff of Research Project 2930

From: Professors Arlynne Cheers and L. J. Carter
Co-Directors of Project 2930

Re: Research Staff Meeting and the Herbert Spitzer Lecture

There is planned a special meeting of all Project 2930 staff (including Laboratory School staff) at 6:30 p.m. on Tuesday, January 9, 1968. The meeting will be held in the Education Building, Room 7. Please come on time!

Dr. Herbert Spitzer, professor of Mathematics Education, State University of Iowa, Iowa City, Iowa, will render lectures at the following hours on January 8.

First Lecture

9:00 a.m. to 11:00 a.m.
in the Double Meeting Room of Favrot Student Union

Second Lecture

6:30 p.m. to 8:00 p.m.
in the Multi-purpose Room of the College Library

Dr. Spitzer will confer with Mr. Willie J. Wright, mathematics specialist with Project 2930 in the afternoon of January 8.

Appendix G

CLINICS DURING THE STUDENT-TEACHING PHASE

EDUCATION RESEARCH PROJECT #2930
SCHEDULE OF PROBLEMS CLINICS

February 12-April 6, 1968

Problems Clinic I

Saturday, February 24, 9 a.m. - 12 noon

Special Concerns
- Classroom behavior problems
- Motivation in 7th & 8th grade science

Problems Clinic II

Saturday, March 9, 9 a.m. - 12 noon

Special Concerns
- Division (Mathematics)
- Classroom behavior problems

Problems Clinic III

Saturday, March 23, 9 a.m. - 12 noon

Special Concerns
- Parent conferences
- Transfer in mathematics

Problems Clinic IV

Friday, April 5, 6:30 - 8 p.m.

Special Concerns
- Evaluation of achievement

EDUCATION RESEARCH PROJECT #2930
SCHEDULE OF PROBLEMS CLINICS

October 1968-December 1968

Problems Clinic I

Saturday, October 12, 1968

Special Concerns
  Teacher-pupil relationships
  Classroom behavior problems

Problems Clinic II

Saturday, October 26, 1968

Special Concerns
  The teaching of science (5th & 6th grades)
  Supervising teacher-trainee relationships

Problems Clinic III

Saturday, November 9, 1968

Special Concerns
  Classroom behavior problems
  Unit plans
  Evaluation

Problems Clinic IV

Saturday, December 7, 1968

Special Concerns
  Summarization of lessons
  Experimentation in science (upper elementary)

SAMPLE

FORM FOR BI-MONTHLY PROBLEMS REPORT

From____________ to_____________

Describe briefly but clearly at least one incident or situation in each of the indicated areas with which you need help. Use additional paper if necessary.

1. Language Arts

2. Social Studies

3. Mathematics

4. Science

5. Classroom Discipline

6. Instructional Methods and/or Materials

7. Evaluation of Pupils' Learning

8. Other Areas

****

On or before__________________mail to:

Dr. Arlynne L. Cheers
Division of Education
Grambling College
Grambling, Louisiana

SAMPLE

SUMMARY OF BI-MONTHLY PROBLEMS REPORT

From Feb. 12, 1968 to Feb. 17, 1968

Describe briefly but clearly at least one incident or situation in each of the indicated areas with which you need help. Use additional paper if necessary.

I. Language Arts

A. I am trying to decide how to teach the pupils good grammar because they hardly ever use good grammar.

B. I encountered a problem last week when I had to take over the class. My pupils were working with the alphabet. My supervising teacher had begun asking the pupils what letter came before a certain letter and which came after. (At this point she left and I took over.) I simply could not get the pupils to understand the concept of "before and after" no matter what I tried and I used all types of examples I could think of at the spur of the moment. I still do not feel that the pupils understand this.

C. A number of the pupils cannot read and some read very poorly. The teacher doesn't provide different lessons for these pupils except in the reader (textbook). I need to know some steps to take in providing reading experiences that will be more meaningful and helpful in all subject matter areas.

II. Social Studies

A. There are several very bright children in the class who are very good at remembering very small details. Some of the questions asked them by the teacher call for the minor as well as the major details and dates. I find myself working harder trying to remember very small things that in college didn't mean very much.

B. I need to find a way to teach social studies in a way in which the pupils will discover the facts themselves. I saw a very, very, very few books in the library and no encyclopedias. They use weekly readers and puzzles for their social studies.

C. The materials used in social studies in my classroom come from the Weekly Reader which is much too advanced for 1st graders. The material that is in the Weekly Reader does not interest the children. When my supervising teacher teaches this lesson most of the pupils go to sleep. The lesson usually lasts about 20 minutes. This means that they usually have to sit from 2:30-3:00 twice weekly. I have decided to use my Curriculum Guide in teaching them Social Studies. I think they will get a better understanding of the material, thus enabling them to learn more adequately.

D. No incident has occurred in the Social Studies block.

E. I have not yet seen a social studies lesson taught from the textbook or course of study. They have been studying about National Negro History Week, taking about 15 minutes before the bell sounds to go home.

F. One incident that occured dealt with pronunciation of geographical terms. I had given one pronunciation of Danube, but when the teacher began the discussion, it was pronounced a different way.

III. Mathematics

A. In the teacher's explanation of some arithmetic problems, I found out that I was unable to explain the problems so that a fifth grade child would understand them. These explanations would come under the steps that underline the working of the problems; or reasons why it is done in this manner.

B. I believe I will have trouble teaching the pupils how to rename numbers when subtracting and adding numbers.

C. I encountered an incident last week in which my pupils had a problem in reading numbers using place value. They are working with tens and ones. When they read a number like 22 instead of saying 2 tens and 2 ones they insist on saying 22 tens.

D. Most of the pupils can not add, subtract, divide, or multiply. Before we can go on with our mathematics lesson, we go through these four fundamentals. With problems such as $2\overline{)4}$ and $\begin{array}{r}33\\ \text{x}11\\ \hline\end{array}$, the pupils gave such answers as $\begin{array}{r}148\\ 2\overline{)4\quad}\end{array}$ and $\begin{array}{r}33\\ \text{x}11\\ \hline 66\end{array}$. We are working with formulas in liquid and dry measures.

E. The pupils are working with fractions in mathematics. They have to solve problems of the following type: 3/4 of 12, 1/2 of 8, 2/3 of 12. Is it necessary to have the pupils follow certain steps closely or should they be allowed to work the problems in any method they understand?

F. I have not started teaching but in teaching the new math, it seems difficult for the teacher to get the pupils to recognize the pattern in counting and writing their numbers.

G. In mathematics, I found that if I study along with the students, my problems dissolve themselves.

H. I think I will need help in mathematics. The fourth grade class is learning old mathematical concepts. The new math has not been introduced because of the lack of textbooks. I know the math book could be supplemented, but I cannot do this unless I have the permission of my supervising teacher. What am I to do?

IV. Science

A. No science has been taught since I have entered this classroom. According to the above statement, the pupils know little or no science. There is no period provided on the schedule for science. I will have to make provisions to have science daily or weekly.

B. In this area, there aren't facilities to use in performing experiments. If there are any to perform, I'll have to supply all materials.

C. Pupils were supposed to bring different materials for an experiment. The next day when they were to perform the experiment, some material was not available. They just went on and talked about the experiment and did not demonstrate or do what was to be done.

D. No difficulty has occurred in science.

V. Classroom Discipline

A. The pupils like to run in the classroom and talk loud.

B. This is the area in which I have the most problems. The pupils have a tendency to walk around and talk, and if you keep a strap, or some means of punishing them, in your hand, they will keep quiet, but if you lay it down, all mouths come open and the walking starts.

C. I have this problem upon some occasions. I have found it very necessary to punish the students (some) in order to set an example for the others. There are a few who actually need strict punishment (whipping) but I don't whip them because I'm not supposed to. What to do?

D. My supervising teacher's kindness is being taken advantage of by the pupils. The only time that she is in complete command is when she has a stick in her hand. She says that she does not believe in whipping and as a result the pupils pay her little attention when she is without her stick. The pupils are familiar with student teachers. They know just what or how much a student teacher can do as far as discipline is concerned. As a matter of fact they have told me that I can't whip them. My psychology is on its way out. What can I do?

E. Classroom discipline is a major problem. We have 34 pupils in the first grade classroom, and all are very active.

F. Several of the pupils are always disrupting order when class is being held. They seem a little disturbed or something and I don't know what to do when they jump up or even refuse to work. I mean they really can't sit thirty minutes without causing a disturbance.

G. A desirable method of handling a six year old boy who seems to be the bully of the classroom. This little fellow is constantly doing something I suppose to get attention. For example - getting in lockers, under the cabinets, fighting and taking things that do not belong to him.

H. There are a few "rabble rousers" in the class. I discovered that if you give them a chance to "perform" in front of an audience (the class) there steam seems to subside.

I. Most of the pupils are very disobedient, they seem to enjoy fighting with their peers. There is one child in particular who fits these descriptions. In short, he is a little "devil."

J. This will be a problem for me. My supervising teacher uses the strap, but it does not work all the time. The pupils still do not obey. They seem to understand the lesson, but when she has reading lessons, they cut up. She has three reading groups. When she is working with one group, the others finish their work and start acting up.

K. The pupils are always interrupting the class discussion or teaching to tell what they are doing wrong at that time. For example "Mrs. Beal, Henry is drawing instead of reading," said Larry. Henry replies, "No, I'm reading." This interruption goes on throughout the class day.

L. I need help in finding another method of discipline besides the "belt." This is the method used at this school, and talking doesn't seem to help.

M. During the week of February 12th-16th, I spent most of my days observing the teacher's methods of directing the class and other daily activities. On one or two occasions, I had the opportunity to take over a lesson. The pupils, although new to me, were very mindful of what I asked them to do after I had repeated my requests several times.

VI. Instructional Methods and/or Materials

A. In a unit on "cells," the teacher used a film strip.

B. My supervising teacher seems to use one method of teaching for all subjects--the question-answer method. She gets the desired results from the students, but I would like some help in arriving at another method that she would consent to along with her method.

C. I've been studying the Guide Books and materials that are helpful in classroom planning.

D. I have not had a chance to test my instructional method; therefore, I do not know if it will be effective.

VII. Evaluation of Pupils' Learning

A. Having graded papers in every block, and especially in the Science and Language Arts block, I think that the material taught was not very clear to the students.

Out of 24 children taking a Social Studies test, there were: 19-F's, 1-D, 4-C's, and only 1-B. In my opinion, the subject matter was not clear, and to me the lesson should have been re-taught, but the teacher went on with another lesson the next day. The problem might be that I don't clearly understand how to determine the evaluation of a lesson that was given.

B. I feel that the pupils learn well under the environmental circumstances. Some of them have to be tutored to overcome certain difficulties that they have.

C. I have only observed the evaluation of the pupils' learning but have noted no difficulties.

D. Evaluation of the pupils' learning is done frequently; that is, they are given paper work as a follow-up of the learning. This paper work is seldom taken up and checked. I have noticed that many pupils do not solve any given problems. To me they are not learning; but re-teaching is not done.

VIII. Other Areas

A. My problem is concerning the groups in my assigned 1st grade classroom. I have a class consisting of about 33 members. There are three different groups in my classroom. There are 12 pupils in the advanced group, 8 in the average group and 13 pupils in the slow, slow group. The pupils that are in the slow group cannot write their names, or form their numbers and do not know how to write the alphabet. This past week I have been working with the slow group. I started working with them on writing their names and in forming their numbers from 1 to 10. I made name cards for all the pupils in the class. After placing their name cards on their desks, I noticed their writing changed. What is the best method in coping with this problem? If I do not work with this slow group, the supervising teacher usually just has them sitting looking and some of them will play.

B. During the SRA period, the pupils tend to get the answer sheets and work the answer out from this. They aren't learning anything and since the teacher doesn't say anything, I don't think I should.

****

On or before ____2-19____ mail to:

Dr. Arlynne L. Cheers
Division of Education
Grambling College
Grambling, Louisiana

Appendix H

OBSERVER-RATER VISITATIONS

SAMPLE

October 15, 1968

Dear Student:

This letter is to remind you of the student-teaching phase of Project 2930, a research venture being administered by members of the Division of Education of Grambling College. Each student-teacher participant in the project will be observed and evaluated during three separate visits by the project observer/evaluator, Mrs. Maxine Chambers.

Please understand that Mrs. Chambers' visits are in addition to visits by Miss Elizabeth Robinson, Director of Student Teaching, and her staff and that Mrs. Chambers' observation and evaluations will be focused upon your effectiveness as a classroom teacher.

The approximate dates of Mrs. Chambers' visits to your school are as follows:

Best wishes for much success in your student-teaching efforts.

Sincerely,

Lamore J. Carter
Professor of Education
Co-Director, Research Project 2930

cc: Professor Arlynne L. Cheers
Co-Director, Project 2930

Spring Semester, 1968

Dates	Student-Teaching Centers	No. of Observations	No. of Days Involved
	(First Round of Observations)		
March 4-10	Ouachita Parish-Monroe City (1st for Sandra West)	13	5
March 11	Webster Parish	3	1
March 12-14	Arcadia-Grambling	9	3
March 15-20	Ruston (and Ouachita-2nd for Sandra West)	11	4
March 21	Chatham-Alexandria	2	1
March 22-25	Caddo	5	2
	(Second Round of Observations)		
March 26 - April 1	Ouachita-Monroe City (3rd for Sandra West before April 1; 1st for Earline Cyriaque on April 1)	14	5
April 2	Webster Parish	3	1
April 3-5	Arcadia-Grambling	9	3
April 8-11	Ruston (and Ouachita, 2nd for Earline Cyriaque)	11	4
April 15	Chatham-Alexandria	2	1
April 16-17	Caddo Parish (Walter Mae Fenceroy missed on 1st round)	6	2

(Third Round of Observations)

April 1-19 & 22-24	Ouachita-Monroe City (3rd for Earline Cyriaque)	13	5
April 25	Webster Parish (and Caddo - 2nd for Walter Mae Fenceroy)	3	1
April 26 & 29-30	Arcadia-Grambling	9	3
May 1-3 & 6	Ruston	10	4
May 7	Chatham-Alexandria	2	1
May 8-9	Caddo Parish (3rd for Walter Mae Fenceroy)	5	2

Fall Semester, 1968

(First Round of Observations)

Oct. 28-29	Grambling Elementary	6	2
Oct. 30-31	Monroe Booker T. (1); Clark (3) Carver (1); Lincoln (1)	6	2
Nov. 1	Arcadia (Crawford Elementary) (First for Clara Mae Green)	1	1
Nov. 4	Ruston I. A. Lewis (2); Lincoln (1)	3	1
Nov. 5	Minden-Shreveport J. L. Jones (2); Hollywood (1)	3	1
Nov. 6	Bastrop (Morehouse Elementary)	1	1
Nov. 8	Kaplan (Indian Bayou Elementary)	1	1

(Second Round of Observations)

Nov. 11-12	Grambling Elementary	6	2
Nov. 13-14	Monroe (Second for Ruby Hill) Booker T. (1); Clark (3); Carver (1); Lincoln (1)	6	2
Nov. 15	Arcadia (Second for Clara Mae Green)	1	1
Nov. 18	Bastrop	1	1
Nov. 20	Kaplan	1	1
Nov. 21	Arcadia (Third for Green)	1	1
Nov. 22	Monroe (Third for Ruby Hill) Carver and Lincoln	3	1
Dec. 2	Minden - Shreveport	3	1
Dec. 3	Ruston	3	1

(Third Round of Observations)

Dec. 4-5	Grambling	6	2
Dec. 6	Monroe	3	1
Dec. 9	Bastrop	1	1
Dec. 12	Kaplan	1	1
Jan. 8	Minden - Shreveport	3	1
Jan. 9	Ruston	3	1

TABLE 12

SUMMARY OF OBSERVER-RATER'S GENERAL EVALUATION OF TRAINEES
Observation I
(E - Experimental N=31) (C - Control N=31)

Behavior Area	Group	Quality of General Performance					
		Outstanding	Very Good	Good	Fair	Poor	Ineffective
Knowledge and Use of Subject Matter	E	1	11	15	4	0	0
	C	1	6	18	5	1	0
Communication Skills	E	2	5	15	8	1	0
	C	1	4	12	12	2	0
Instructional Methods	E	1	8	16	6	0	0
	C	0	4	16	10	1	0
Motivation of Pupils	E	1	8	11	11	0	0
	C	0	7	14	8	2	0
Discipline of Pupils	E	2	6	14	9	0	0
	C	0	11	13	7	0	0
Personal Interactions with Pupils	E	1	7	17	6	1	0
	C	0	10	14	6	0	0
Overall Teaching Effectiveness	E	1	9	12	9	0	0
	C	0	4	19	7	1	0

Group	Quality of Adaptability					
	Completely	Very	Moderately	Somewhat	Barely	Not at all
E	1	19	8	0	1	0
C	0	11	18	0	1	0

TABLE 13

SUMMARY OF OBSERVER-RATER'S GENERAL EVALUATION OF TRAINEES
Observation II
(E - Experimental N=31) (C - Control N=31)

Behavior Area	Group	Quality of General Performance					
		Outstanding	Very Good	Good	Fair	Poor	Ineffective
Knowledge and Use of Subject Matter	E	1	8	14	8	0	0
	C	1	5	20	4	1	0
Communication Skills	E	0	6	18	6	1	0
	C	0	4	15	11	1	0
Instructional Methods	E	0	1	21	9	0	0
	C	0	2	21	7	1	0
Motivation of Pupils	E	0	7	14	9	0	0
	C	0	6	15	8	2	0
Discipline of Pupils	E	0	7	18	5	1	0
	C	0	13	12	6	0	0
Personal Interactions with Pupils	E	0	7	21	3	0	0
	C	0	9	16	6	0	0
Overall Teaching Effectiveness	E	1	9	13	8	0	0
	C	0	3	21	7	0	0

Group	Quality of Adaptability					
	Completely	Very	Moderately	Somewhat	Barely	Not at all
E	0	19	11	0	1	0
C	0	23	7	0	0	0

TABLE 14

SUMMARY OF OBSERVER-RATER'S GENERAL EVALUATION OF TRAINEES
Observation III
(E - Experimental N=31) (C - Control N=31)

Behavior Area	Group	Quality of General Performance					
		Outstanding	Very Good	Good	Fair	Poor	Ineffective
Knowledge and Use of Subject Matter	E	0	5	23	3	0	0
	C	0	2	24	5	0	0
Communication Skills	E	0	3	22	5	1	0
	C	0	1	18	11	1	0
Instructional Methods	E	0	4	25	2	0	0
	C	0	1	26	4	0	0
Motivation of Pupils	E	0	6	21	4	0	0
	C	0	5	19	6	1	0
Discipline of Pupils	E	0	11	12	8	0	0
	C	0	9	16	5	1	0
Personal Interaction with Pupils	E	0	8	19	4	0	0
	C	0	7	20	4	0	0
Overall Teaching Effectiveness	E	0	6	23	2	0	0
	C	0	3	24	4	0	0

Group	Quality of Adaptability					
	Completely	Very	Moderately	Somewhat	Barely	Not at all
E	0	21	9	0	0	0
C	0	20	10	0	0	0

Appendix I

CATEGORIES OF INSTRUCTIONAL DISCOURSE

TABLE 15

SUMMARY OF RECORDED ITEMS OF INSTRUCTIONAL DISCOURSE CATEGORIZED BY SUBJECT

Item	Group	Subject			
		Lang. Arts	Social Studies	Science	Math
1:10	C	34	17	16	18
	E	35	19	17	18
1:11	C	18	2	5	10
	E	16	7	5	13
1:12	C	7	6	2	6
	E	11	10	5	10
1:13	C	1	1	0	0
	E	6	3	0	0
1:14	C	2	0	1	0
	E	3	3	1	0
2:10	C	20	5	6	8
	E	21	6	3	9
2:11	C	1	0	1	0
	E	3	0	3	1
2:12	C	24	9	15	7
	E	24	14	11	17
2:13	C	31	19	18	12
	E	32	16	17	16
2:14	C	8	4	9	4
	E	11	8	6	4
2:15	C	6	3	3	2
	E	8	7	5	9
2:16	C	9	5	10	7
	E	12	10	11	8
3:10	C	16	13	14	10
	E	17	14	15	12
3:11	C	9	4	4	6
	E	7	6	5	7
3:12	C	14	7	5	1
	E	10	9	6	2

TABLE 13--Continued

Item	Group	Subject			
		Lang. Arts	Social Studies	Science	Math
3:13	C E	23 27	14 14	15 14	8 12
3:14	C E	12 16	9 11	7 9	7 9
3:15	C E	20 13	13 14	17 12	8 13
3:16	C E	17 15	4 8	1 5	6 9
3:17	C E	2 4	1 0	2 1	2 1
3:18	C E	5 4	3 4	4 3	3 3
3:19	C E	1 3	2 1	2 2	2 1
3:20	C E	3 4	2 3	6 3	1 3
3:21	C E	6 2	3 1	3 4	2 1
3:22	C E	26 22	15 18	15 14	14 13
3:23	C E	2 3	1 4	0 1	1 0
3:24	C E	8 4	7 4	4 1	4 4
4:10	C E	23 30	13 12	15 11	14 13
4:11	C E	1 2	2 1	4 3	0 1
4:12	C E	16 16	10 5	6 10	8 8

TABLE 13--Continued

Item	Group	Subject			
		Lang. Arts	Social Studies	Science	Math
4:13	C E	18 19	14 11	11 9	10 6
4:14	C E	12 17	6 10	7 7	6 6
4:15	C E	5 10	2 2	2 2	2 4
4:16	C E	1 1	0 0	0 1	0 1

Set of Categories for Classifying Classroom Discourse taken from Smith, B. O., "A Study of the Logic of Teaching" in Gage, N. L. "Paradigms for Research on Teaching," in Handbook of Research on Teaching, Chapter 3, pp. 286-288. Edited by N. L. Gage, Chicago: Rand McNally Co., 1963.

1. Defining. Entries making up this group are concerned with how words or other symbols are used to refer to objects (abstract or concrete). These entries vary in form and content, but in general they ask, implicitly or explicitly, for the meaning of terms.

2. Describing. To describe is to represent something by words or drawing, to tell about something. The entries making up this category mention or suggest something and require that an account of this something be given.

3. Designating. To designate is to identify something by name--words or other symbol. The name designates the object (abstract or concrete) to which it refers. Thus, this group of entries is made up of items in which something is described or otherwise indicated, and the name used to refer to it or to identify it is asked for.

4. Stating. Entries in this group do not ask for names, descriptions, etc., but for things to be stated. They may ask for statements of issues, steps in proofs, rules, obligations, theorems; conclusions, ideas, beliefs, promises, threats, etc.

5. Reporting. The entries in this group ask for a report on what a book or document says, for information in the text, or for a summary or review, and the like.

6. Substituting. The entries making up this category ask the student to perform a symbolic operation, usually of a mathematical nature.

7. Valuating. To engage in valuating is to estimate the worth, dependability, etc., of something. An entry of this type requires that some object, expression, event, action, or state of affairs be rated as to its value, dependability, desirability, and the like.

8. Opining. To opine is to express beliefs, usually based on little or no evidence. Such beliefs are about what is possible, what might have been and is not, what might obtain in the future, or the like.

9. Classifying. Each entry in this group makes explicit reference to an instance or class (type, sort, group, set, kind) of things or both. The entry requires that a given instance be put in the class to which it belongs, as a subclass.

10. Comparing and Contrasting. This type of entry requires that two or more things--actions, factors, objects, processes, etc.--be compared. In some cases, the entry specifies two or more things, and asks that either their similarities or differences be noted with respect to a particular characteristic.

11. Conditional Inferring. This category consists of entries, each of which contains an antecedent and a consequent, but never a consequent alone. In all cases where the antecedent alone is given, the entry requires that the consequent--effect, result, outcome, subsequent behavior--be supplied as the answer. Some of the entries containing both an antecedent and consequent ask for value judgments, some ask for statements of result or outcome, and others for descriptions of actions, decisions, and the like.

12. Explaining. There are several types of explanation entries, but they all have one thing in common. They give a particular consequent and they require that an antecedent be supplied. There are six kinds of explanation entries, depending upon the sort of antecedent used to account for the consequent. They are mechanical, causal, sequent, procedural, teleological, and normative.

13. Directing and Managing Classroom. Many questions asked by teachers have little or no logical significance. They are designed, not to evoke thought, but to keep the classroom activities moving along.

It is believed that the categories defined above can be used as the basis for the development of an instrument to be used in measuring between-classroom differences in trainee-pupil classroom discourse.

Appendix J

THE EXPERIMENTAL APPROACH

126/

ILLUSTRATIVE ASSIGNMENT

Education Research Project #2930

Assignment - due Friday, October 27

Using the instructional objectives submitted by Grambling Laboratory School Faculty, Grades 1-6 (Language Arts, Grades 1-8) prepare a skeletal curriculum guide.

Steps of procedure to be followed.

1. Using the Syllabus Part II, chapters 2-5, group the instructional objectives by subject and by grade under the appropriate basic learnings (as identified in the syllabus).
2. Indicate for the skills subjects an appropriate learning experience that could be used in achieving each main learning within a grade.
3. Indicate for the environmental studies a topic of content that could be used in achieving each main learning within a grade.
4. Indicate for each main learning at least one instructional aid that could be used during the learning experience and/or in teaching the topic.
5. Discuss your material with the appropriate staff member; make any corrections that are suggested.
6. Obtain the staff members signature and "o.k." for final approval before your curriculum guide is passed in.

SAMPLE FORMATS

Language Arts (or Math)

Grade	Basic Learning (List instructional objectives by no. from compiled list)	A Suggested Learning Experience; Vocabulary (a) Major Teacher Activity (b) Major Pupil Activity	Instructional Aids (Indicate the specific purpose that the aid(s) could serve.)

Social Studies (or Science)

Grade	Basic Learning (List instructional objectives by no. from compiled list)	An Illustrative Topic of Content (a) Vocabulary words (b) At least three major ideas to be presented by teacher (c) At least three thought provoking questions to be asked by teacher	Instructional Aids (Indicate the specific purpose that the aid(s) could serve.)

Suggested Resources:

Elementary Textbooks, Curriculum Guides, Units of Work, Manuals and activity books in the Learning Resource Center, Education Library - Mrs. Pauline Lee, Librarian.

CURRICULAR MATERIALS PRODUCED

Experimentation during the course of this study led to the following curricular materials:

1. A Syllabus -- Toward the Professional Preparation of Elementary School Teachers

2. Tapes

   Lectures by:
   - Arthur L. Irion
     Department of Psychology, Tulane University
   - Harl R. Douglass
     Consultant in Education, University of Colorado
   - Herbert F. Spitzer
     Professor of Education, State University of Iowa
   - Alfreeda Lake DeBerry
     Supervisor of Schools, Bolivar, Tennessee
   - Archie L. Lacey
     Professor of Science Education, Hunter College of the City University of New York
   - Robin J. McKeown
     Professor of Social Science Education, University of California at Berkeley
   - Letisha Jones
     Consultant in Language Arts, Little Rock University and South Central Regional Education Laboratory
   - Billie L. Shumate
     Consultant in Elementary and Secondary Education, Webster College, Webster Grove, Missouri

3. Video Tapes

   - The Teaching of Reading (1st Grade)
     Icelia Land, Grambling Laboratory Elementary School
   - The Teaching of Mathematics (3rd Grade)
     Emma Lee Gray, Grambling Laboratory Elementary School
   - The Teaching of Mathematics (5th Grade)
     Delores B. Rollins, Grambling Laboratory Elementary School
   - The Teaching of Social Studies (6th Grade)
     Irazone Osborne, Grambling Laboratory Elementary School
   - The Teaching of Science (8th Grade)
     Reuben Gaulden, Grambling Laboratory Elementary School

4. Thirteen Observational Guide-Forms to be used in connection with the laboratory experiences in the teaching of methods of instruction

5. Sample Curriculum Guides (Grades 1-6 or 8)

   Curriculum Guide for Language Arts
   Juanita Allen, Teacher-Trainee
   Project 2930

   Curriculum Guide for Mathematics
   Delois Allen, Teacher-Trainee
   Project 2930

   Curriculum Guide for Science
   Cyrenthia Dunn, Teacher-Trainee
   Project 2930

   Curriculum Guide for Social Studies
   Patricia Addison
   Juanita Allen
   Delois Allen
   Dorothy Bridges
   Catherine Roy
   Gay Desiree Lewis, Teacher-Trainees

   Supportive Children's Literature for an Elementary School Curriculum
   Gay Desiree Lewis, Teacher-Trainee
   Project 2930

6. A Pictorial Report -- "A Picture Story of Research Project #2930"

PROJECT #2930

LABORATORY TEACHER-STUDENT OBSERVATION SCHEDULE*
FALL SEMESTER, 1967-68

TEACHER	GRADE	STUDENT OBSERVATION ASSIGNMENT											
#1 MRS. LAND	1	1 2 3	31 32	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6
#2 MRS. J. BROWN	1	4 5 6	1 2 3	31 32	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9
#3 MRS. GOODWIN	2	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12
#4 MRS. ROBERTS	2	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15
#5 MRS. GRAY	3	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18
#6 MRS. HUGHES	3	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28	25 26	22 23 24	19 20 21
#7 MRS. HILL	4	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28	25 26	22 23 24
#8 MRS. DAVIS	4	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28	25 26
#9 MISS TURNER	5	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30	27 28
#10 MRS. OSBORNE	5-6	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32	29 30
#11 MRS. ROLLINS	6	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3	31 32
#12 MRS. CALVIN	7 & 8	31 32	29 30	27 28	25 26	22 23 24	19 20 21	16 17 18	13 14 15	10 11 12	7 8 9	4 5 6	1 2 3

*Each student spends approximately one week with each of twelve laboratory teachers in grades 1 through 5. The result in two weeks in grade 1, but with two teachers.

Education Project #2930

Fall Semester, 1967
M W F 10-12 a.m.
W Th 3:30-4:30 p.m.

SCHEDULED SEQUENCE OF COURSE ACTIVITIES

Laboratory Experiences
(M W F 10-11)

Seminar
(M W F 11-12)

Critiques and Individual Conferences
(W Th 3:30-4:30)

Section I-Planning for Teaching

Unit I - Curricular Preparation

The School Curriculum and the Objectives of the Elementary School

1. The Objectives of the Elementary School
2. Expected Contribution of Elementary School Subjects
    - (a) The Symbolic Skills Subjects
    - (b) The Environmental Studies
3. Expected Contribution of School Sponsored Out-of-Class Experiences.
4. Expected Contribution of Experiences Within the Class Group.

Laboratory Experiences:

1. Examination of Courses of Study and Curriculum Guides.
2. Examination of Yearly Long-range Plans.
3. Examination of Schedules - Class Schedules and Schedules of Extra-class Activities.

Special Common Readings for Seminar

Syllabus - Introduction
Syllabus - Part I, Chapters 1, 2, 3, 4, 5 and 6.

Special Assigned Readings for Seminar

The Elementary School (1966) Wm. C. Wolf, Jr., and Bradley Loomer, Part II, "Basic Dimensions of the Elementary School."

This Is Teaching (1956) Lawrence D. Haskew, Chapter 5, "What Learners Do in School"; Chapter 7, "Ends Sought by Teaching"; Chapter 9, "Helpers for the Teachers."

Teaching in Elementary School (1965) Mehl, et. al., Chapter 3, "Identifying Goals of Elementary Education," and Part III, "Curriculum Materials."

Readings in Education (1956) eds. Foff and Grambs, Part XII (pp. 333-378) 7 selections on "The Elementary School."

Public Education in America (1956) Cressman and Benda, Chapter 9, "Goals of Education for America's Schools"; Chapter 10, "The Curriculum and Curricular Activities"; Chapter 11, "Cocurricular Activities."

Introduction to Education (1966) Crow and Crow, Chapter 11, "The Curriculum in Democratic Education" and Chapter 12, "Cocurricular Activities."

An Introduction to Education in Modern America, (1957) Lee, Chapter 8 "Elementary Education" and Chapter 11 "Out-of-Class Activities in Organized Education."

An Introduction to the Study of Education (1965) Frasier, Chapter 8, "The Elementary School."

Foci for Critiques and Conferences

1. Individual student questions growing out of Laboratory Experiences.
2. What are the goals of the School? Of the individual grades? Of the individual subjects?
3. What are the basic textbook series?
4. What supplementary series, if any, are provided?
5. For what basic series, if any, are work books provided?
6. How do teachers order needed school supplies during the year?
7. What are the rules regulating field trips?
8. What are the specific policies regulating school programs. classroom programs, classroom parties, and the exchange of gifts at Christmas?
9. What are the rules that regulate the use of the playground?
10. What records are teachers expected to keep?

Unit II - Studying Elementary School Pupils

1. The Elementary School Child and His Learning.
   - a) Determining Health and Physical Status.
   - b) Determining Level of General Knowledge.
   - c) Determining Level of Achievement.
   - d) Determining Personal Characteristics That Are Affecting Learning.
2. Educational Diagnosis - Identifying Pupil with Troubles.

Laboratory Experiences:

1. Examination of Cumulative Records.
   - a) Health records
   - b) Test records
   - c) Personal data
   - d) Personal characteristics
2. Observation of Pupils.

Special Common Readings for Seminar

Syllabus - Part II - Chapter 7

Special Assigned Readings for Seminar

Measurement and Evaluation, Torgeson and Adams, "Studying Individual Pupils," Chapters 4-8.

Tests and Measurements for Teachers, Cheers and Berry, "The Basis for Evaluation," Chapter 5, and Appendix A, "The School Testing Program."

The Elementary School (1966) Wm. C. Wolf, Jr., and Bradley Loomer, Part III; "Children in School: The Vital Ingredient."

The Discovery of Teaching (1962) Cole S. Brembeck, Part VI, "The School and Community."

This Is Teaching (1956) Lawrence D. Haskew, Chapter 3, "These Are the Learners," and Chapter 2, "To School."

Teaching in the Elementary School (1965) Mehl, et. al., Chapter 6, "Getting Acquainted with the Individual Learner."

Readings in Education (1956) eds. Foff and Grambs, Part VI (pp. 125-153) 3 selections on "How Children Learn and Grow" and Part VII (pp. 154-199 - 7 selections on "The School and The Community").

Public Education in America (1956) Cressman and Benda, Chapter 12 "The Child and His Development," and Chapter 14, "Non-School Educational Influences in the Community."

Introduction to Education (1966) Crow and Crow, Chapter 13, "The Development of Self-discipline"; and Part V, "Nonformal Educational Agencies."

Education for All (1955) French, Chapter 10, "Guidance" (statements for evaluation, pp. 284-285).

An Introduction to Education in Modern America (1957) Lee, Chapter 25, "The Provision of Equal Educational Opportunity."

Foci for Critiques and Individual Conferences

1. Individual student questions that result from laboratory experiences.
2. Does the school have a testing program? Are the tests given once or twice each year? What uses are made of the test results?
3. What regular assistance is given by a school doctor and a school nurse?
4. What are the specific rules and regulations regarding children who are involved in accidents while they are under school authority?
5. What are the standards of behavior required of children inside the school building?

Section II - Analysis of the Instructional Sequence

Unit I - Instructional Components of the Teaching Learning Process

1. Teacher Discourse and Instruction.
2. Instructional Strategies and the Learning Act.
3. Instructional Media and the Learning Act.
4. Categories of Learning Outcomes and the Learning Act.
5. Categories of Learning Outcomes and the End Effects of the Learning Act.

Laboratory Experiences

Observation of the Instructional Process

Special Common Readings for Seminar

Syllabus - Parts II and III
The Conditions of Learning, Robert M. Gagné, Chapter 2-7.

Special Assigned Readings for Seminar

The Elementary School (1966) Wolf and Loomer, Chapter 7, "Methods of Teaching in the Elementary School."

This Is Teaching (1956) Haskew, Chapter 6, "What Teachers Do in School."

Teaching in the Elementary School (1955) Mehl, et. al., Chapter 7, "Planning for Learning," Chapter 8, "Guiding Classroom Learning" and Chapter 13, "Providing for Exceptional Children."

Readings in Education (1955), eds. Foff and Grambs, Part IV (pp. 71-103 - 8 selections, "The Historical Foundations of Education").

Introduction to Education (1966) Crow and Crow, Part IV, "Special Aids in Education, " and Chapter 15, "The Function of Measurement in Education."

Education for All (1955) French, Chapter 4, "The Teacher" (pp. 116-133) and Chapter 5, "The Preparation of the Teacher" (pp. 164-165).

Foci for Critiques and Individual Conferences

Additional questions: Individual student questions growing out of observation.

1. What were the teachers doing?
2. What were the teachers saying?
3. What were the teachers using to facilitate their effort?
4. What was done or said by some teachers that was different?
5. What were the pupils doing?
6. What were the pupils saying?
7. What were the pupils learning?

Unit II - The Instructional Sequence

A "Lesson" Analyzed

1. The length of a lesson.
2. The stages (or phases) of a lesson.
3. The differences and similarities among lessons.

Laboratory Experiences

Observation
Analysis of Sample Lesson Plans

Special Common Readings for Seminar

Syllabus - Part II - Chapter 8 and 9

Special Assigned Readings for Seminar

The Conditions of Learning, Robert M. Gagne, Chapters 8-10.

The Discovery of Teaching (1962) Cole S. Brembeck, Part V, "The Teacher at Work with Students."

Education for All (1955) French, Chapter 7, "Principles, Techniques, Procedures."

Readings in Education (1956) eds. Foff and Grambs, Part X (pp. 265-309 - 4 selections on "The Teaching Process")

Foci for Critiques and Conferences

Additional questions: Individual student questions that arise from observation.

1. What were the lessons that were being taught?
2. How were the lessons being taught?
3. Did each lesson have the same number of parts? Why?
4. Was the same kind of thing done in a specific part of each lesson? Why?
5. What is involved in a lesson plan?

Sections III and IV - Achieving the Instructional Objectives Via the Theoretical Model Analyzed and Utilized

A. Phase I, Empahsis: Initiation and structuring of learning Motives

1. Procedures for the development of pupil interest and orientation.
2. Procedures for the identification and assessment of pupil ability to do the lesson.

Laboratory Experiences

Observation
Micro-teaching

Special Common Readings and Viewings for Seminar

Playback of Tapes of Micro-Teaching
Syllabus, Part II, Chapter 8 - "The Theoretical Model," "Developmental Concepts Related to Phases of the Theoretical Model."
Syllabus, Part II, Chapter 9 - "Adaptations to Suit Individual Pupil Needs" and "Procedural Sequence in Instruction."

Special Assigned Readings for Seminar

Teaching in Elementary School (1965) Mehl, et. al., Chapter 5, "Basic Principles of Learning and Motivation."

Education for All, (1955) W. H. French, Chapter 3, "The Pupil" (statements for evaluation).

Foci for Critiques and Conferences

1. Individual student questions that arise from observations and micro-teaching.
2. What? How? Why?

B. Phase II, Emphasis: Perception/Organization of Learning Tasks

1. Presenting the Learning Task.
2. Assisting pupils in seeing what is to be done and how to do what is expected of them.

Laboratory Experiences:

Observation
Micro-teaching
Film analysis

Special Common Readings and Background Information for Seminars:

Information presented by films
Feedback of topics from micro-teaching
Syllabus: Part II, Chapter 8, "The Theoretical Model" and "Developmental Concepts Related to Phases of the Theoretical Model," (Phase II)
Syllabus: Part II, Chapter 9, "Step 2"

Teaching in Elementary School (1965) Mehl, et. al., Chapter 8, Guiding Classroom Learning

"A Logical Model for Conceptualizing and Other Related Activities," Kenneth B. Henderson (Merrill Reprint 18402)

Foci for Critiques and Conferences

1. Individual student questions arising from observations, micro-teaching and film analysis.
2. What? How? Why?

C. Phase III, Emphasis: The Learning Act

1. Engaging pupils in a series of significant related experiences to achieve the goals of the lesson.
2. Assessing pupil efforts.
3. Assessing pupil progress toward goals.

Laboratory Experiences

Observations
Micro-teaching
Film analysis

Special Common Readings and Background Information for Seminars:

Syllabus, Part II, Chapter 8, "The Theoretical Model" and "Developmental Concepts Related to Phases of the Theoretical Model," (Phase III)

Syllabus, Part II, Chapter 9, "Steps 3-8."

Tests and Measurements for Teachers, Cheers and Berry, Chapter 6

Measurement and Evaluation, Chapters 10-16, Torgeson and Adams.

Teaching in Elementary School (1965) Mehl, et. al., Chapter 4, "Teaching for Different Types of Growth" and Chapters 10-12, "Grades 1-6"; Chapter 15, "Ascertaining the Nature and Amount of Pupil Growth."

Foci for Critiques and Conferences

1. Individual student questions that arise from observations, micro-teaching and film analysis.
2. What? How? Why?

D. Phase IV, Emphasis: End Effects of the Learning Act

1. Securing evidence that pupils have or have not found what they were looking for.
2. Assisting performance to determine the degree to which pupils have been successful.

3. Providing follow-up exercises.
4. Assisting pupils to use in appropriate situations that which they have learned.

Laboratory Experiences

Observations
Micro-teaching
Film analysis

Special Common Readings and Background Information for Seminars:

Syllabus: Part II, Chapter 8, "The Theoretical Model" and "Developmental Concepts Related to Phases of the Theoretical Model," (Phase IV)

Syllabus: Part II, Chapter 9, "Step 8."

Tests and Measurements for Teachers, Cheers and Berry, Chapter 12.

Teaching in Elementary School (1965) Mehl et. al., Chapter 16, "Recording and Reporting Pupil Growth and Status."

Unit II - Teacher Relationships and Growth

1. Relationships with administrative and supervisory personnel.
2. Relationships with co-workers.
3. Relationships with parents.
4. Professional growth opportunities.
5. Academic freedom and academic responsibility.

Laboratory Experiences

Visitation - Faculty and PTA Meetings
Role Playing of parent conferences

Special Common Readings for Seminars

The Elementary School (1966) Wolf and Loomer, Chapter 12, "Professionalism and the Elementary School Team."

The Discovery of Teaching (1962) Cole S. Brembeck, Part VIII, "The Personal and Professional Life of the Teacher."

This Is Teaching (1957) Lawrence D. Haskew, Chapter 9, "Professional Organizations" (in Helpers for the Teacher).

Teaching in Elementary School (1965) Mehl, et. al., Part IV; "The Teacher."

Introduction to Education (1966) Crow and Crow, Chapter 9, "The Teacher and His Professional Activities."

An Introduction to the Study of Education (1965) Frasier, Appendix B, "The Code of Ethics of the Education Profession."

Foci for Critiques

1. Individual student questions that arise from laboratory experiences.
2. What? How? Why?